The Structure of the World in Udayana's Realism

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The Structure of the World in Udayana's Realism

A Study of the *Lakṣaṇāvalī* and the *Kiraṇāvalī*

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FOREWORD

Books dealing with individual philosophers as well as annotated translations of their works are very much in need in the field of classical Indian philosophy. Hence the research efforts of modern scholars should increasingly be devoted to this objective. Professor M. Tachikawa has selected a very short elementary treatise of Udayana as well as some portions of a larger work of the same author to supplement the first. His aim is to present to us, in Udayana's own term, how he (Udayana) sees the Nyāya-Vaiśeṣika system in a synoptic fashion. I wish to take this opportunity to say a few things about Udayana and the Nyāya-Vaiśeṣika system.

UDAYANA

Udayana was a pre-eminent philosopher and an astute logician of the eleventh-twelfth century India. He belonged to the Mithila region of the present Bihar state.[1] In the history of the Nyāya-Vaiśeṣika, he holds a very crucial position. In fact, two different schools of philosophy, Nyāya and Vaiśeṣika, belonging to ancient India, merged into one in the writings of Udayana. As it has been said, in Udayana, the happy marriage between Nyāya and Vaiśeṣika was complete – the Vaiśeṣika ontological scheme (*padārthas* or system of categories) was in this way combined with the *pramāṇa* doctrine (logic and a theory of knowledge) of Nyāya to produce what later came to be designated as Navya-nyāya. Therefore, Udayana can rightly be called the 'father' of Navya-nyāya although he did not write the *Tattvacintāmaṇi*, which the traditional scholars regarded as the standard book of Navya-nyāya.

PHILOSOPHY VS SPIRITUAL DISCIPLINE

Vātsyāyana distinguished philosophy from religion or spiritual discipline, and from any other discipline, by underlining the fact that *pramāṇa* theory (a theory of evidence and criteria of knowledge) as well as the 'logical' method called *nyāya* that is initiated by a doubt (*saṃśaya*) culminating in a decision (*nirṇaya*) constitutes the special subject-matter of philosophy (*ānvīkṣikī*). Philosophy thus has a separate *prasthāna*. Had it not been so, since the goal

of philosophy may eventually coincide with man's ultimate concern, viz., freedom from suffering or *duḥkha*, philosophy would have been indistinguishable from a spiritual discipline or a soteriology (*adhyātmavidyā*). An example of a spiritual discipline is given by Vātsyāyana, viz., the Upaniṣads.

Kauṭilya writing his *Arthaśāstra* made almost the same point about *ānvīkṣikī* or philosophy marking it as a separate discipline because of its emphasis upon logical theory and theory of knowledge. What Kauṭilya and Vātsyāyana said about philosophy was repeated and defended by other Naiyāyikas such as Jayanta, and it was tacitly accepted by most other philosophers of classical India. Thus I wish to argue against such a view as regards each of the Indian *darśanas* to be concerned with the practical guidance to *mokṣa* or the ultimate freedom of man, and hence its problmes, method and concerns can hardly be called 'philosophical' in the modern Western sense of the term.[2] It is a common point made by Uddyotakara and many others that study of philosophy does not by itself lead to mokṣa directly; it simply imparts knowledge, a special kind of metaphysical knowledge, knowledge of things as they are or knowledge of the state of affairs (*tattvajñāna*). Such knowledge guides our actions, and it is through performance of moral and religious acts based upon such knowledge, through leading of an ideal life enlightened by such knowledge, that one approaches the ultimate freedom or *mokṣa*. If we discount sectarianism, then it is my contention that most classical Indian philosophers or *dārśanikas*, who accepted the *pramāṇa* method, were as much concerned with philosophical problems, issues and method as was any other philosopher at any part of the world at any time of history. I further believe that their concern for classification and analysis of human knowledge (cf. *pramāṇa*), their search for a model of sound argument (cf. *parama-nyāya*), and their formulation of definition and examination of concepts (cf. *uddeśa, lakṣaṇa* and *parīkṣā*, of Vātsyāyana) put them unquestionably in the company of Plato, Aristotle, Descartes and Hume.

LAKṢAṆA AND DEFINITION

Udayana's manual *Lakṣaṇāvalī* (literally means 'a series of definitions'), that is translated here, contains technical formulation of definition (*lakṣaṇa*) of the basic ontological concepts of the Nyāya-Vaiśeṣika school. The notion of definition as *lakṣaṇa* is, however, different from the notion of definition used in mathematical logic. *Lakṣaṇa* involves formulation or identification of the unique feature or property or condition which distinguishes the 'things' to be defined from those that are not.[3] Philosophy is regarded by some ideally as a

system of definition of interrelated concepts or, in practice, a description of how definitions might be given. Udayana's text here falls squarely within this category, i.e., this style of philosophizing.

Definition or *lakṣaṇa* is however a very difficult philosophic enterprise. Some even argue that it is impossible to formulate logically faultless definition unless it is a stipulative definition or contextual definition for eliminative purpose, as is done in modern mathematical logic. Others feel that ordinary definitions of philosophers unsuspectingly take them into the disreputable domain of meaning and essentialism.[4] But this scepticism about ordinary definition need not be overemphasized. Philosophers from ancient times have formulated definitions of one sort or another. It is philosophically rewarding to see and analyse the arguments that lead a philosopher to formulate the definition that he does formulate, although the definition itself, in the form in which it is presented, may not be acceptable to all.

A philosopher picks out a term from ordinary discourse, whose usage ordinarily is too loose, too flexible and too vague. The aim of the philosopher's attempt to define it is not so much to give an accurate account of its ordinary usage as to clarify, and in fact, sharpen the concept in a way that will fit into the philosophic scheme he is about to unfold. The domain of the meaning of a term in ordinary usage is like an uncharted land with fuzzy edges, flexible enough to fit into the total thought that each individual is trying to communicate, but too elusive to be neatly demarcated. A philosopher in defining that term tries to focus upon some particular area or other of this uncharted land so that he can use the term along with other terms to describe his system. Another philosopher attempting to present a different system may focus upon another area of that uncharted land and formulate a different definition.

A case in point is the ordinary Sanskrit term *dravya* which we usually translate as 'substance' or 'thing'. Nyāya-Vaiśeṣika defines it in a way it would fit into its ontological scheme of six or seven categories, whereas Patañjali and Bhartṛhari define it as the reference of any substantival expression.[5] Sometimes it is defined as the existent.[6] In each case, I argue that the ordinary meaning of the term has neither been completely respected nor been totally ignored. In this respect, the philosophic definitions differ from the artificial definitions of Pāṇini's grammar (cf. definiton of *ṭi* and *ghu*, this is called *saṃjñā* or designation) as well as from the contextual definitions of mathematical logic. The Nyāya-Vaiśeṣika definition of *dravya* 'substance', therefore, should be seen as an integral part of the system as a whole. It is philosophically fruitful to see what arguments are given to lead to the definition that is

finally offered, and why. It can be criticized for internal inconsistency, if any. Or, its criticism has to be the criticism of the system as a whole. No other way is open to us to consider whether this definition of *dravya* is better or worse than one given by, e.g., Bhartṛhari.

UDAYANA AND ŚRĪHARṢA

This is the fourth volume in our series 'Studies of Classical India'. We are pleased to see that the series has already attracted the attention of scholars and research students. Our first volume was on Śrīharṣa's *Khaṇḍanakhaṇḍakhādya.*[7] This volume is on Udayana's *lakṣaṇas*. Historically these two authors were related in the sense that one was the successor of the other and therefore devoted his philosophic activity mainly in criticizing and attacking the former. Although we have reversed the order of chronology in our series (for, indeed, Udayana preceded Śrīharṣa), it should be noted that Śrīharṣa's *Khaṇḍanakhaṇḍakhādya* was a criticism and refutation of the definitions (*lakṣaṇa*) of all the philosophic or ontological categories offered by Nyāya-Vaiśeṣika, mainly those formulated by Udayana. Hence these two volumes are philosophically connected. In fact, Śrīharṣa presented the other side of the coin, trying to show that the definitional activity of a Naiyāyika like Udayana is doomed to failure and hence such activity cannot constitute the proper business of philosophy. For Śrīharṣa, therefore, philosophic activity consists in the refutation only of dogmas, assumptions of reality, and attempted definition and classification of the categories of thought. Udayana comes at the other end of the scale and firmly believes that philosophic activity must aim at formulating definitions of the categories of existence and thought, for definability ensures their intelligibility and hence goes a long way to establish their reality. I will ask earnest readers to judge how far Udayana was successful in showing plausibility of this dictim about definability.

BIMAL KRISHNA MATILAL

NOTES

[1] Matilal, B. K.: *Nyāya-Vaiśeṣika: A History of Indian Literature*, ed. by J. Gonda (Vol. 6, Fasc. 2, Otto Harrassowitz, 1977), p. 96.

[2] Potter, K. N.: *Indian Metaphysics and Epistemology* (Princeton, 1977), p. 38.

[3] Matilal, B. K.: 'Definition, Lakṣaṇa and Essentialism', forthcoming in *Journal of Indian Philosophy*.

[4] Quine, W. V.: 'Vagaries of Definition' (*Ways of Paradox and Other Essays*, 1976 ed.), pp. 50–55.

[5] Matilal, B. K.: *Epistemology, Logic and Grammar in Indian Philosophical Analysis* (Mouton & Co., 1971), pp. 98–106.

[6] Bhartṛhari: *Vākyapadīya Kāṇḍa* III, *Dravya-samuddeśa*. Also Matilal, B. K.: 'A Note on the Jaina Conception of Substance', *Sambodhi* 5 (1976), pp. 3–12.

[7] P. Granoff: *Philosophy and Argument in Late Vedānta*, *Studies of Classical India*, Vol. I (D. Reidel, Dordrecht, 1978).

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Spring 1981 MUSASHI TACHIKAWA
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PART I

THE STRUCTURE OF THE WORLD

Introduction to the *Lakṣaṇāvalī* and the *Kiraṇāvalī* (the Sections on Earth, Water, and Fire)

CHAPTER I

INTRODUCTION: BASIC CONCEPTS

A. THE WORLD AND ITS COMPONENTS

Many Indian philosophers, among them the Hindu and Buddhist logicians, held the world to be a complex of a number of factors. The complex appeared to them to be a closed unit which possessed a certain structure. Indian philosophers made a great conscious effort in their attempt to describe the structure of the world. A large portion of each Indian philosophical system is occupied by a structural description of the world. Attitudes towards this structural description, however, differ according to schools. The difference in the method of description is fundamentally significant for the history of Indian philosophy.

As the world is composed of various factors, in order to describe the structure of the world it is necessary to determine the kind of relation between the component factors. Usually one expresses relations between component factors in a statement. For example, the determinate knowledge (or conceptualized knowledge) that a pot is blue may be expressed by the statement, 'A pot is blue' (*ghaṭo nīlaḥ*). In this statement two components, a pot, and the color blue, as well as the relation between them, are mentioned. To give another example, the statement 'A pot is falling' (*ghaṭaḥ patati*) refers to the relation between the pot and the action of falling. Here again two factors and the relation between them are mentioned. One can see that these two statements describe particular aspects of the world. Simple and separate notions, such as 'pot' or 'blue', give little information about the structure of the world. A statement describing some aspect of the structure of the world should mention at least two components and the relation between them.

B. PROPERTY (*DHARMA*) AND PROPERTY-POSSESSOR (*DHARMIN*)

The commonest term for the components of the world is *dharma*. The term used in this sense means not only things, but also properties, relations, and states insofar as the *dharma* may be an object of cognition. Even absence or negation (*abhāva*) is considered as a component of the world and is called a *dharma*.

But the term *dharma* may be used in a limited sense also. In this sense it means a property (or entity) which belongs to an entity. The entity which possesses a property (or entity) (*dharma*) is called the 'property-possessor' (*dharmin*). For example, if there is fire on a mountain, the fire is called the *dharma*; the mountain, the *dharmin*. The mountain here may be considered to be the possessor of fire as it is the locus of fire. Note that fire is found on the mountain through conjunction, not through inherence. To give another example, when there is a blue pot, the color blue can be considered to be inherent in the pot. In this case, the color blue, the property, belongs to the pot, the property-possessor, through inherence, and not through conjunction. Thus, the *dharma-dharmin* relation can be found between two things whether they constitute the relation of conjunction or inherence.[1]

C. QUALIFICANS (*VIŚEṢAṆA*) AND QUALIFICAND (*VIŚEṢYA*)

When a pot is blue, the color blue or the property of being blue may be considered to quality the pot by giving a particular attribute to the pot. Hence, the color blue or the property of being blue is called the 'qualificans' or 'qualifier' (*viśeṣaṇa*), and the pot is the qualificand (*viśeṣya*). Thus one can say that the qualificand is the locus of the qualificans while the qualificans is that which rests on the locus. In other words, the *dharma* acts as the qualificans of the *dharmin* insofar as the former rests on the latter, and the *dharmin* is the qualificand.

D. INDIVIDUAL MANIFESTATION (*VYAKTI*) AND GENERIC CHARACTER (*JĀTI*)

It is possible to take the statement, 'A pot is an earth substance', to mean that a pot is a member of the class Earth-substance. Generally speaking, one can take 'x is y' to mean 'x is a member of the class y'. Here the subject denotes an individual thing and the predicate, a class. Indian logicians, however, have a tendency not to speak of membership in terms of the relation between a set and its member. Instead, they are apt to consider membership in terms of the relation between an individual manifestation and the generic character residing in it. This way of reasoning is closely connected with the fact that Indian philosophers have not developed the concept of class as a set consisting of members. The most common Sanskrit word for a generic character is '*jāti*', which seldom means a class in the above sense.[2] I prefer 'generic character' as its translation.[3]

No generic character has its own elements or members and nothing can be

attributed to a generic character. A generic character can inhere in things, but nothing can inhere in it. It is impossible for a class consisting of members to reside in each of its members, but a generic character cannot exist unless it resides in individual manifestations. For the existence of a generic character, there must be at least two loci in which the generic character inheres. For example, space is one and only one in number. Therefore space possesses no generic character. One might think of space as a class or set whose member is one in number, but logicians in ancient and medieval India did not consider a unit class as having a generic character.

In short, according to Indian logicians, the relation between a class and its members may be expressed by the following formulas:

(1) Generic Character x is the *dharma* of Individual Manifestation y, and

(2) Individual Manifestation y is the *dharmin* of Generic Character x.

Indian logicians thus express membership in terms of the *dharma-dharmin* relation.

E. STATEMENTS EXPRESSING THE *DHARMA-DHARMIN* RELATION

The *dharma* and the *dharmin* are expressed in a statement as the qualifier and the qualificand. One should notice that there is remarkable correlation between Indian logic and Sanskrit syntax.[4] Just as the *dharma-dharmin* relation is one of the most fundamental relations in epistemological polemics in India, the form 'A possesses B' is one of the commonest forms of Sanskrit sentences. Hence, when Indian logicians express the *dharma-dharmin* relation in a statement, they take advantage of such correlation between the pattern of logical thinking in India and Sanskrit syntax.

In ordinary Sanskrit, 'Sound is impermanent' may be expressed by

anityaḥ śabdaḥ. (1)

'*Anityaḥ*' is a nominative singular, meaning 'impermanent'. '*Śabdaḥ*' is a nominative singular, meaning sound. In Sanskrit the copula is not written. This Sanskrit sentence may be rewritten as

śabdasya anityatvam (or *śabde anityatvam*). (2)

Here the suffix '*-tvam*' is attached to the stem '*anitya-*' while '*śabdaḥ*' is replaced by its genitive '*śabdasya*' (or by its locative '*śabde*'). The suffix '*-tva*' has the function of making an abstract noun, hence '*anityatva*' denotes

'non-permanent-ness' or impermanence. The result of this transformation may be more literally translated as '[There is] impermanence in sound'. The *dharma-dharmin* relation between sound and impermanence is more clearly expressed by (2) than by (1).

Another Sanskrit transformation is

śabdaḥ anityatvavān. (3)

The suffix '*-vān*' (nom. sg. of *-vat*, which means 'possessing') is attached to the stem '*anityatva*', while the genitive '*śabdasya*' is replaced by its nominative '*śabdaḥ*'. This may be translated as 'Sound is a possessor of impermanence'.

The pertinent point is that these types of transformation are very common in Sanskrit. Indian logicians prefer the form found in (2) or in (3) to the form found in (1).[5] It has been pointed out that the initial statement of Indian syllogisms have the basic form: x possesses y (or there is y in x).[6]

We can transform statements expressing the relation between a generic character and its individual manifestation in a similar way. For example, 'A pot is an earth substance' may be expressed by

ghaṭaḥ pārthivadravyam. (1)

This Sanskrit sentence may be rewritten as

ghaṭe pārthivadravyatvam. (2)
(There is the property of being an earth-substance in a pot.)

or as

ghaṭaḥ pārthivadravyatvavān. (3)
(A pot is a possessor of the property of being an earth substance.)

In short, logicians in medieval India tended to think of the relation between the components of the world in terms of the *dharma-dharmin* relation. This relation was considered to be one of the most suitable relations by which one can describe the ontological structure of the world. The consideration of the structural system of the world in terms of such a relation allowed Indian logicians to given an intensional[7] character to the knowledge system wherein the world is understood as a complex of single and uniform units.

CHAPTER II

BACKGROUND HISTORY AND METHODOLOGY

A. BACKGROUND HISTORY

The history of Indian logic may be divided into three periods: Old Logic, Buddhist Logic, and New Logic.[1] The origins of formal logic in India may go back to the fourth century B.C., but the oldest systematic writing of the major school of Indian logic, the *Nyāyasūtra*, seems to have been composed at some time between the time of Christ and A.D. 200.[2] The dates of important Mahāyāna texts, such as the *Prajñāpāramitāsūtra*, the *Saddharmapuṇḍarīkasūtra*, and the *Gaṇḍavyūhasūtra*, seem to fall between 50 B.C. and A.D. 200. Thus Mahāyāna Buddhism arose at the time when the Old Logic was taking its systematic form. Buddhist Logic was established by Dignāga (A.D. 480–540).[3] It is to be noted that the first and the second periods of Indian logic were characterized by intense conflict between Buddhist logicians and orthodox Hindu logicians.

Nāgārjuna not only established Madhyamaka philosophy but also determined the fundamental direction of Mahāyāna Buddhism. The history of Madhyamaka philosophy can be considered as a history of the commentaries on the *Mūlamadhyamakakārikā* (*MMK*), the main work of Nāgārjuna. His followers, such as Piṅgala (A.D. 300–350),[4] Buddhapālita (500), Bhāvaviveka (500–570),[5] and Candrakīrti (650), wrote commentaries on *MMK* without making any great contributions to Nāgārjuna's philosophy. Asaṅga, one of the early founders of the *Vijñaptimātratā* (Mind Only) theory, also wrote a commentary on *MMK*, the *Shun chung lun*, which has been preserved only in Chinese.[6] It is obvious that Vasubandhu, the consolidator of the *Vijñaptimātratā* theory, owes much to Nāgārjuna's theory of Voidness (*śūnyatā*). As a matter of fact, the *Vijñaptimātratā* theory can be regarded as a development of the theory of Voidness.[7] The influence of Voidness on Dignāga's logic also has been pointed out.[8]

Nāgārjuna developed his theory through negating opinions set forth by his opponents. In this sense his attitude is negative and critical throughout. His main opponents are the Naiyāyikas among the non-Buddhist philosophers, and the Vaibhāṣikas, among the Buddhists. Especially in his *Vaidalyaprakaraṇa* Nāgārjuna vehemently criticizes the 'realistic' approach of the Naiyāyikas.

Dignāga's logic planted the seed from which the later Buddhist thinkers as well as the Nyāya-Vaiśeṣika philosophers could culture their own logical systems. For example, Dignāga had influence on Praśastapāda who re-organized the *Vaiśeṣikasūtra* system. Uddyotakara commented on Vātsyāyana's *Nyāyabhāṣya*, criticizing Dignāga's theory but at the same time inheriting important elements from him. Dharmakīrti in turn, criticizing Uddyotakara, wrote the *Pramāṇavārttika*, which, together with Dignāga's *Pramāṇasamuccaya*, is one of the most important works in the second period of the history of Indian logic. Just as followers of Nāgārjuna continued writing commentaries on the *Mūlamadhyamakakārikā*, followers of Dharmakīrti wrote commentaries or sub-commentaries on the *Pramāṇavārttika*.

Śāntarakṣita's *Tattvasaṃgraha* is another important work of Indian Mahāyāna Buddhism. After Śāntarakṣita, Vācaspatimiśra appeared on the Hindu orthodox side and criticized the Buddhist doctrine in a commentary on Uddyotakara's *Nyāyavārttika*. The intense argument between the Buddhist and the Hindu orthodox logicians thus continued, although the Buddhists seem to have been losing their power little by little after Śāntarakṣita.

It was towards the end of the period of the Gupta kings that the revival of Vedic religion and Brahmanic learning became remarkable.[9] Some schools remained non-tantric, but many adopted a tantric approach. Mahāyāna Buddhism was also becoming more and more influenced by tantrism, especially after the seventh century. In the eleventh century Buddhist tantrists, such as Mai tri pa, were initiating their disciples, such as Mar pa, who had come from Tibet. In around the same era Hindu philosophers attacked the Buddhists vehemently and uprooted the power of Buddhist monks, who escaped to Tibet taking their esoteric doctrines with them.

The one who made the greatest contribution to driving the Buddhists out of India was Udayana. He may be said to have brought the conflict between the Buddhist logicians and the Hindu logicians to an end. Among the Buddhist scholars whom he criticized are Dharmakīrti, Kalyāṇarakṣita (A.D. 820),[10] Dharmottara (A.D. 847),[11] and Jñānaśrīmitra (A.D. 1050) who was the champion of the Buddhist side in the time of Udayana. Ratnakīrti, a disciple of Jñānaśrīmitra, seems to have been alive when Udayana wrote the *Ātmatattvaviveka.*[12] Indian Mahāyāna Buddhism was subsequently unable to produce any scholar capable of refuting Udayana. The attempt to refute Udayana passed over to Vedāntins such as Śrīharṣa.

B. METHODOLOGY

Modern Indologists have often used the term 'realists' to refer to the Naiyāyikas or the Vaiśeṣikas and the term 'nominalists', to the Buddhists and the Vedāntins. Granted that these terms have special connotations from the history of Western philosophy which do not fit the Indian data, there still seems to be reason to use them.

Stcherbatsky was among those scholars who viewed the history of Indian philosophy as a series of conflicts between 'nominalism' and 'realism'. He described these conflicts as follows:

> . . . two independent schools were in India the champions of a most radical Realism. For them not only Universal, but all relations were real things, or real 'meanings', having objective reality and validity. They were the Nyāya-Vaiśeṣika school on the one hand and the Mīmāṃsaka on the other. The opponents were the Sāṃkhya system and the Hīnayāna school at the beginning, the Mahāyāna Buddhists and Vedānta in the sequel. These school assailed Realism and vindicated a kind of Nominalism which denied the objective reality of the Universals and of the category of Inherence.[13]

Thus he means by 'nominalism' a theory wherein the objective reality of both universals and inherence is denied; and by 'realism', a theory wherein the reality of both is accepted.

Generally speaking, one can explain the difference between Indian nominalism and Indian realism as follows: The Hindu realists believe in the reality of generic characters or universals and hold the distinction between *dharma* and *dharmin* to be definite, while Indian 'nominalists', such as Mahāyāna Buddhists deny both the reality of universals and the clear distinction between *dharma* and *dharmin*.

It should be added here that *dharma* and *dharmin* are generally regarded to be real entities existing independently of each other just like fire and a mountain. Hence, the term '*dharma-dharmin* relation' usually denotes conjunction or contact (*saṃyoga*). Here, however, the term is used in a limited sense to indicate only two kinds of relations: those of inherence (*samavāya*) and those between an absence (*abhāva*) and the locus (*adhikaraṇa*) of the absence. As has been mentioned earlier (cf. Part I, Chapter I, Note 1), the latter *is* a form of self-linking relation (*svarūpasambandha*). Uddyotakara, who was one of those great contributors to classical Indian logic, stated in the *Nyāyavārttika* that there is the qualificans-qualificand relation

(*viśeṣaṇaviśeṣyabhāva*) in inherence and absence (Calcutta ed. p. 97, 1. 7: *samavāye cābhāve ca viśeṣaṇaviśeṣyabhāvāt*). The term 'qualificans-qualificand relation' here has the same extension as our '*dharma-dharmin* relation'.

The conflict between nominalistic movements and realistic movements in Indian philosophy may be expressed in terms of a function of the distinction (or distance) between *dharma* and *dharmin*. Generally speaking, the clearer the distinction between the two, the more realistic the theory becomes; if the boundary between *dharma* and *dharmin* becomes vague, the theory tends to be nominalistic.

Scholars have pointed out the importance of the *dharma-dharmin* relation in the history of Indian philosophy.[14] Dharmendra Nath Shastri, for example, looks at the history of Indian philosophy from the point of view of the *dharma-dharmin* relation. The following paragraph summarizes his theme:

> The dualism of *dharma* and *dharmin* is the dividing line between the Nyāya-Vaiśeṣika and the Pūrva-Mīmāṃsā on the one hand, and all the *idealistic** schools, the Vedānta, the Yogācāra, the Madhyamika on the other. While the Nyāya-Vaiśeṣika holds that there are two entities, *dharma* and *dharmin*, which are different in essence, the Vedānta refuses to accept them as two different entities. According to the Vedānta, only *dharmin* (substratum of attributes), which is Brahman, exists; all its attributes (dharmas) in the form of the manifold phenomenal world (*prapañca*) are unreal. Thus only *dharmin* (substratum) exists, dharmas do not. . . . The Buddhist position, as held by the Dignāga school, is just the opposite. Only *dharmas* – discrete moments (unique particulars) – exist. *Dharmin* is only a mental construction and is unreal.[15]
>
> [* He uses this term instead of 'nominalistic'.]

He refers to the position of Sāṁkhya philosophy, which is a midpoint between the two groups:

> Like the Nyāya-Vaiśeṣika school, the Sāṃkhya holds that there are two things, *dharma* and *dharmin*, both of which are real. But unlike the Nyāya-Vaiśeṣika, the Sāṁkhya declares that *dharmas* are only different states or phases of the *dharmin*, their essence being identical.[16]

C. MY SUBJECT

I would like to focus on Udayana and observe the *dharma-dharmin* relation as it appears in the works of this ultra-realistic logician. What kind of relation

did he posit between *dharma* and *dharmin*? If he clearly distinguished *dharma* from *dharmin* by following the realistic tradition, how did he incorporate the distinction into the components of his universe? What significance did his realistic system have for the Buddhist thinkers?

D. AN ANALYSIS OF NĀGĀRJUNA'S NOMINALISTIC VIEW

Before dealing with Udayana's theory in detail, let us look at the nominalistic view of Nāgārjuna and see what kind of relation obtains between *dharma* and *dharmin* in his thought. Since one can consider Nāgārjuna and Udayana to represent the two poles through the first and the second periods of the history of Indian logic, an analysis of Nāgārjuna's thought will be useful for a study of Udayana.

In the *Mūlamadhyamakakārikā* (*MMK*) the *dharma-dharmin* relation is one of the most important topics, although the relation between cause and effect (Chapter 4), the relation between being and non-being (Chapter 15), and the relation between past, future, and present (Chapter 19) are also treated.[17]

We shall see that Nāgārjuna in *MMK* tries to obscure the borderline between *dharma* and *dharmin* by asserting the invalidity of the statement, '*Dharma* resides in *dharmin*'. Nāgārjuna holds that the statement, '*Dharma* resides in *dharmin*', presupposes the clear distinction between *dharma* and *dharmin*. In other words, he assumes that, if it is possible to say that *dharma* resides in *dharmin, dharma* and *dharmin* are different and separate entities and accordingly the existence of one is established without depending upon the existence of the other. Of course, he does not admit that presupposition.

MMK contains many statements that involve three elements: *dharma, dharmin*, and the relation between the two. For example, Chapter 7, v. 20 a–c. of *MMK* reads as follows:

> *sataś ca tāvad utpattir asataś ca na yujyate / na sataś cāsataś ceti* . . . . //[18]

The content of this verse may be rewritten without any change of meaning as follows:

Example 1.	(1)	*sato notpattiḥ.*	(There is no arising of that which exists.)
	(2)	*asato notpattiḥ.*	(There is no arising of that which does not exist.)
	(3)	*sadasato notpattiḥ.*	(There is no arising of that which both exists and does not exist.)

It is easy to see that *utpatti* (arising) and *sat* (that which exists) stand in the *dharma-dharmin* relation. This relation is found also between *utpatti* and either *asat* (that which does not exist) or *sadasat* (that which both exists and does not exist). Let us represent '*utpatti*' by '*X*', '*sat*' by '*Y*', '*asat*' by '$\tilde{Y}$', and '*sadasat*' by '$Y\tilde{Y}$'. '*Y*gen' or '$\tilde{Y}$gen' indicates that '*Y*' or '$\tilde{Y}$' is in the genitive case. Similarly, '*utpattiḥ*' in the above text may be symbolized by 'Xnom'. The sign '~' at the beginning of a schema means that the schema is false. Now the content of Example 1 can be put into the following schemata:

(1) ~ (*X*nom *Y*gen)
(2) ~ (*X*nom $\tilde{Y}$gen)
(3) ~ (*X*nom $Y\tilde{Y}$gen)

These three statements have the form: It is not true that there is *dharma* x in *dharmin* y. The *dharma-dharmin* relation between x and y is expressed through the syntactical connection of the genitive case and the nominative case. The combination of the genitive case and the nominative case is most frequently used by Nāgārjuna to express the *dharma-dharmin* relation.

To give another example, Chapter 2, v. 3 a–b reads as follows:

Example 2. *gamyamānasya gamanaṃ kathaṃ nāmopapadyate* / [19]
(How is it possible that there occurs the action of traversing at the very point [of a road] which is just in the state of being traversed?)

When one puts '*Y*' for '*gamyamāna*' and '*X*' for '*gamana*', one can derive the following formula from Example 2:

~ (*X*nom *Y*gen)

As in the previous case, the *dharma-dharmin* relation is here expressed by the syntactical connection between the genitive case and the nominative case.

Chapter 2, v. 1 of *MMK* reads as follows:

Example 3. *gataṃ na gamyate tāvad agataṃ naiva gamyate / gatāgat-avinirmuktaṃ gamyamānaṃ na gamyate* // [20]
(The points [of a road] that have already been traversed are not being traversed. Neither are those points [of a road] that are not yet traversed being traversed. The very point [of a road] which is just in the state of being traversed, being apart from either the traversed or the not-yet-traversed points, is not being traversed [or not recognized].)

The statement '*gamyamānaṃ na gamyate*', which has the form: nominative + verb, has been rewritten as '*gamyamānasya na gamanam*', which has the form: genitive + nominative, in Chapter 2, v. 4. One can see the *dharma-dharmin* relation more clearly expressed in this rewritten form.

After having dealt with 'that which is to be traversed' (*gantavya*), the *dharmin*, and the action of traversing, the *dharma*, Nāgārjuna goes on to examine the relation between a traverser and the action of traversing which are also found in the relation between *dharmin* and *dharma* (Chapter 2, v. 8–11.).

In Chapter 3 he deals with the visual organ (or that which sees objects) and the action of seeing. Chapter 3, v. 5 a–b reads:

Example 4. *paśyati darśanaṃ naiva naiva paśyaty adarśanam* /[21]
(The visual organ does not see. That which is not the visual organ does not see either.)

As in Example 3 the action of seeing is here denoted by a verb. The content of this verse may be rewritten as follows:

(There is not any action of seeing in the visual organ.
There is not any action of seeing in that which is not the visual organ.)

Thus Nāgārjuna tries to obscure the borderline between *dharma* and *dharmin* by saying that *dharma* cannot reside in *dharmin*. He claims that there must be two *dharmas* in order for *dharma* to reside in *dharmin*. One *dharma* is ncessary to make the existence of the *dharmin* possible, because without the former the latter cannot possibly exist. No visual organ can exist without the action of seeing, so we need another *dharma* to reside in the *dharmin*. Our point of argument was whether the action of seeing resides in the visual organ or not. To assume the existence of two *dharmas*, however, is not acceptable. When a visual organ is seeing something, there is only one action of seeing, not two.

CHAPTER III

UDAYANA AND HIS WORKS

A. THE TIME OF UDAYANA

Udayana's *Lakṣaṇāvalī* contains the well-known verse declaring that he composed the work in a year corresponding to A.D. 984.[1] But the verse in question occurs only in one manuscript, and a series of objections have been raised against this date.[2] Dineshcandra Bhattacharya has confirmed "by a large volume of evidence" that Udayana was born about A.D. 1025 and that the period of his activities covered the latter half of the eleventh century.[3]

B. THE WORKS OF UDAYANA

Seven works of Udayana have been preserved. They are

(1) the *Lakṣaṇāvalī* (The Garland of Definitions),
(2) the *Lakṣaṇamālā* (The Wreath of Definitions),
(3) the *Ātmatattvaviveka* (Discussions about the True Nature of the Soul)
(4) the *Nyāyakusumañjali* (A Handful of Nyāya-tree Flowers),
(5) the *Nyāyapariśiṣta* (The Nyāya-appendix) or *Prabodhasiddhi* (The Accomplishment of Enlightenment),
(6) the *Nyāyavārttikatātparyapariśuddhi*,
(7) the *Kiraṇāvalī* (The Garland of Rays).[4]

Udayana probably composed these works in the above order.

Judging from the works, it seems that he did not compose any work or commentary on any work unless it was essential to the building of his system. There are no commentaries on Sāṃkhya or Mīmāṃsaka texts among his known works. Instead, each of his works is devoted to a set of problems within his own system. Metaphorically speaking, each of his works is a separate part of a complete house.

The Nyāya and the Vaiśeṣika philosophies as incorporated into his system can be compared to the main walls of the 'house'. The *Kiraṇāvalī* is a commentary on the *Praśastapādabhāṣya* (or *Padārthadharmasaṃgraha*), a Vaiśeṣika treatise. The *Nyāyavārttikatātparyapariśuddhi* is his commentary on Vācaspati's *Tātparyaṭīkā*, which is a commentary on Uddyotakara's *Nyāyavārttika*, which is in turn a commentary on Vātsyāyana's *Nyāyabhāṣya*, which is itself

a commentary on the *Nyāyasūtra*. This work of Udayana is the last important commentary written in the periods of Old Logic and Buddhist Logic and seems to have marked the end of the age of creative works based upon the *Nyāyasūtra*. The position of this work in the Nyāya portion of Udayana's system is analogous to that of the *Kiraṇāvalī* in the Vaiśeṣika portion. His Vaiśeṣika manual, the *Lakṣaṇāvalī*, and his *Nyāya* manual, the *Lakṣaṇamālā*, are the 'windows' in each 'wall'. He also wrote the *Nyāyapariśiṣṭa*, a separate commentary on the fifth chapter of the *Nyāyasūtra*.

In the *Ātmatattvaviveka* he criticizes Buddhism from the Nyāya-Vaiśeṣika point of view and tries to establish the existence of the omniscient soul. The *Nyāyakusumañjali* is his proof of the existence of God. These two works may be compared to the 'floor' and the 'roof' of his 'house'.

The early history of the Vaiśeṣika, as of other Indian systems, is essentially a history of commentaries on the basic texts of the school, in this case the *Vaiśeṣikasūtra* (*VS*) and the *Praśastapādabhāṣya* (*PBh*). More scholars have written commentaries on *PBh* than on *VS*. The following commentaries on *PBh* have been preserved:

(1) Vyomatyācārya's *Vyomatī* (*VY*) (Chowkhamba Sanskrit Series, No. 61.) (A.D. 950),

(2) *Nyāyakandalī with Praśastapādabhāṣya*, Ganganatha-Jha-Granthamala, Vol. 1, Benares, 1963; Śrīdhara's *Nyāyakandalī* (*NK*) (Vizianagram Sanskrit Series, Vol. 4, No. 6.) (A.D. 991),[6]

(3) Udayana's *Kiraṇāvalī* (*KV*),

(4) Jagadīśa Tarkālaṃkāra's *Dravyabhāṣyasūkti* (*DS*) (Chowkhamba Sanskrit Series, nos. 316, 342, 354, 374, 375, 384, and 396) (second quarter of the 17th century),[7]

(5) Padmanābha Miśra's *Setu* (*SE*) (Chowkhamba Sanskrit Series, published together with (4).)[8]

In the *Kiraṇāvalī* Udayana is both conservative and original. He follows faithfully the traditional doctrine of Praśastapāda. At the same time, he introduces a number of new theories, which do not, however, contradict the old doctrine. In comparison to Udayana, one can say that Bhāsarvajña, a Naiyāyika and immediate predecessor of Udayana, is radical. Bhāsarvajña admits only three means of knowledge, and he considers action to be a kind of quality. Furthermore, he does not consider number, separateness, farness, nearness, or speed to be qualities. He defines disjunction as the absence of conjunction, and he does not admit viscidity to be a quality residing only in water.[9] Udayana, who criticizes Bhāsarvajña in *KV*, does not accept any of these theories.[10]

Vallabhācārya (end of the 12th century)[11] is revolutionary. He did not accept many of the theories which Praśastapāda established and Udayana inherited from Praśastapāda. For example, according to Praśastapāda, the color of water is the color white and not-shining, its taste is sweetness, and its 'touch' or temperature is coldness, fire is shining, white, and hot. Vallabhācārya, however, raises objections to each of those traditional views.[12]

These radical traditions seem to have been inherited by later Nyāya-Vaiśeṣika philosophers, such as Raghunātha Śiromaṇi whose categorical system is surprisingly different from the traditional doctrine established by Praśastapāda and followed by Udayana.[13]

The *Lakṣaṇāvalī* (*LV*) is a compact Vaiśeṣika manual. It is in this work that Udayana developed a new method of definition that was to be further refined by the New Logic. But there is still a considerable difference in technique between the definitions of *LV* and those of Gaṅgeśa, the consolidator of the New Logic. The theories of limitor (*avacchedaka*) and determining factor (*nirūpaka*), for example, do not appear either in *LV* or in *KV*. Still, Udayana's techniques are far more advanced than those of his predecessors such as Vyomatyācārya and Śrīdhara. Udayana seems to be freer in *LV*, an independent work, than in *KV*, which is a commentary. In *KV*, for example, he follows Praśastapāda in accepting only six categories or *padārthas* while he admits absence (*abhāva*) as the seventh category in *LV*.

In the *Lakṣaṇamālā* (*LM*) we see how Udayana synthesizes the Nyāya philosophy with the Vaiśeṣika. First he gives the definition of valid knowledge (*pramā*); then he goes on to discuss the means of valid knowledge (*pramāṇa*), relying on the Nyāya tradition.[14] Next he defines the objects of cognition (*prameya*) and divides them into three types: body, sense-organ, and object.[15] *LM* enumerates six categories as the objects of the means of valid cognition: substance, quality, action, universal, distinction, and inherence. Following the Vaiśeṣika tradition, Udayana enumerates and defines nine kinds of substances, twenty-four kinds of qualities, and five kinds of actions. Some definitions in *LM* coincide with definitions in *LV*.[16] The rest of *LM*, which is rather dependent upon the Nyāya tradition, deals with doubts (*saṃśaya*), examples (*dṛṣṭānta*), fallacious marks (*hetvābhāsa*), futile answers (*jāti*), etc.[17]

The *Ātmatattvaviveka* (*ATV*) is known also as the '*Bauddhadhikkārarahasya*' (The Secret of Defying the Buddhists). In this work Udayana refutes the Buddhist doctrines and makes theoretical preparation for the proof of the existence of the omniscient and permanent soul which is for Udayana God. This work criticizes especially the following four Buddhist doctrines:

(1) That things are momentary,

(2) That things do not possess external reality,
(3) That the possessor of qualities is not different from those qualities,
(4) That things are void.

The third criticism is especially important in connection with our examination of the *dharma-dharmin* relation. 'The possessor of qualities' here means the soul; and 'qualities', the qualities of the soul, such as knowledge and happiness.

In the *Nyāyakusumañjali* Udayana, a Śaivite, tries to prove the existence of God. In the first of five chapters, the author is concerned with the diversity in the phenomenal world. He observes the order of the factors comprising the universe, and he seeks to explain the structure of the world from the point of view of cause and effect. According to Udayana as well as other Vaiśeṣikas, there is a regular current of cause and effect in the universe.[18]

The supreme maxim in the Vaiśeṣika philosophy is: cause precedes effect. For the existence of a pot, for example, there must be someone who has made it. Udayana as well as other Hindu theologians hold that a product such as a pot, is made by some sentient entity. For them the one who has made this world, which is a product, is God.[19] In a similar way, grass in the mouth of a flying bird does not fall because the bird is holding it. Likewise, there must be a supporter of this universe. For Udayana the supporter is God.

The Cārvākas, the Mīmāṃsakas, the Buddhists, and the Jains do not accept the existence of God, and for the Sāṁkhya the teleology of *prakṛti* (material cause) is sufficient to explain the process of the formation or the structure of the universe.[20]

The Vaiśeṣika philosophy too was rather indifferent to theism in its earlier period. The *Vaiśeṣikasūtra*, which seems to have taken its present manuscript form by A.D. 200, has no single aphorism which clearly mentions God as the creator or the instrumental cause of the world. It is Praśastapāda who introduced into the Vaiśeṣika system the concept of God who creates and destroys the world. In the Nyāya school, on the other hand, Uddyotakara declared that God is the instrumental cause of the world, as did Vācaspatimiśra, who consolidated Uddyotakara's Nyāya theory.[21] Śrīdhara, who was either an immediate predecessor of Udayana or his contemporary, developed a theistic theory in the Vaiśeṣika philosophy. Udayana's system of thought is based upon these theistic traditions.

CHAPTER IV

THE STRUCTURE OF THE WORLD

Introduction to a translation of the *Lakṣaṇāvalī*

The *Lakṣaṇāvalī* (*LV*) may be considered to be a list of the definitions of the categories (*padārtha*)[1] and their subdivisions in the Vaiśeṣika philosophy. In this work Udayana first divides the objects of cognition into things that exist (*bhāva*) and absence (*abhāva*). He further divides the former into six categories: substance, quality, action, universal, distinction, and inherence. Finally he subdivides each category into nine substances, twenty-four qualities, five actions, two universals, and four absences. These categories and their subdivisions are the unchangeable units of which the world is composed.

Udayana classifies the categories in terms of the concepts of '*samaveta*' (that which inheres in things) and '*samavetavat*' (that which has things inhering in itself). When the relation between two things is that of *samaveta* to *samavetavat*, it is simply one of inherence (*samavāya*). As we have already seen (Part I, Chapter I, B)' inherence is a form of *dharma-dharmin* relation. The range of inherence is completely subsumed under the range of the *dharam-dharmin* relation. I shall illustrate the relation between *samaveta* and *samavetavat* by drawing rectangle *X* representing *samaveta* above rectangle *Y* representing *samavetavat*, as seen in Figure 1. The line drawn between the two rectangles indicates that the thing denoted by *X* inheres in the thing denoted by *Y*. A dotted line, however, indicates that the thing denoted by *X* does not inhere in the thing denoted by *Y*. (See Figure 2.)

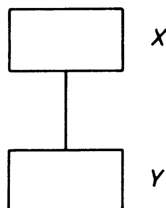


Fig. 1.

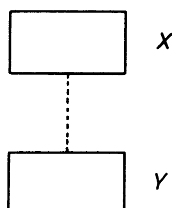


Fig. 2.

One can see how Udayana classifies the categories in terms of *X* and *Y* in Table I.

TABLE I

Category	To be designated by *X*	To be designated by *Y*
permanent substance	no	yes
impermanent substance	yes	yes
quality	yes	yes
action	yes	yes
universal	yes	no
distinction	yes	no
inherence	no	no
absence	no	no

A permanent substance, i.e., an atom, cannot be designated by *X*, for an atom cannot inhere in anything. It can be designated by *Y*, since an atom can have things inhering in itself. A pot inheres in an atom, but an atom cannot inhere in a pot. Inherence and absence can be designated neither by *X* nor by *Y*. That is to say, these two cannot inhere in anything nor can they have anything inhering in them.

Inherence is the medium (or operating factor) of the 'relation description' of the world. In other words, in the system described in *LV* the first five categories are related by the sixth category, inherence. (For the time being, let us put absence aside.) It is especially in *LV* that Udayana tries to show the structural system of the world in terms of *samaveta* and *samavetavat*.

Note that Udayana classifies or defines categories in terms of *samaveta* and *samavetavat*, not in terms of *samavāya* (inherence). The avoidance of the term '*samavāya*' in characterizing the categories is Udayana's device. The convenience of this method is that one can directly refer to either of the two factors which constitute the relation called *samavāya*. If one characterizes categories in terms of *samavāya*, one is also forced to explain the relation between *samavāya* and either of the two factors.

Although absence cannot inhere in anything, it can have its loci in the system of *LV*. In other words, absence and its locus are not found in the *samaveta* and *samavetavat* relation, but they are found in the *dharma-dharmin* relation. The *samaveta-samavetavat* relation and the relation between absence and its locus are especially important among the relations appearing in *LV*. One can illustrate absence, its locus, and the relation between the two in the same way as we did in Figures 1 and 2.

It is helpful to our understanding of the *LV* system to represent symbolically the definition given in *LV*. Suppose that two things, x and y, are in the

dharma-dharmin relation. The *dharma-dharmin* relation for purposes of the present discussion consists only of two relations: the *samaveta-samavetavat* relation and the relation between absence and its substratum. When we substitute 'A' for the predicate '( ) is a *dharma* of ( )', we can get '$A(x, y)$' for 'x is a *dharma* of y'.[2] Similarly, when we substitute 'B' for the predicate '( ) is a *dharmin* of ( )', we can get '$B(y, x)$' for 'y is a *dharmin* of x'. The relation 'being a *dharma* of' is the converse of the relation 'being a *dharmin* of'. It is easy to understand that '$A(x, y)$' can be rewritten as '$B(y, x)$'. And let us substitute for the predicate '( ) is not a *dharma* of ( )' by '$\tilde{A}(x, y)$'.

LV expresses the *dharma-dharmin* relation in several ways according to the situation:

(1)	x inheres in (*samaveta*) y.	$A(x, y)$
(2)	x occurs in (*vṛtti*) y.	$A(x, y)$
(3)	y is the locus of (*adhikaraṇa*) x.	$B(y, x)$
(4)	y has (*-mat* or *-vat*) x.	$B(y, x)$
(5)	x does not inhere in (*samaveta-tvarahita*) y. (lit., x lacks the property of inhering in y.)	$\tilde{A}(x, y)$
(6)	y is not the locus of (*adhikaraṇa*) x.	$\tilde{B}(y, x)$

Generally speaking, the word '*vṛtti*' may be used to refer to the relation of contact, as in the case where fire occurs on a mountain. '*Adhikaraṇa*', '*-mat*', and '*-vat*' may also refer to relations other than the *samaveta-samavetavat* relation. In *LV*, however, these four expressions are always used to refer either to the *samaveta-samavetavat* relation or to the relation between absence and its locus.

We have shown Udayana's classification of categories in a figure above. Now let us examine his classification by using the symbolism we have set forth. That which may be designated by the above rectangle X may be symbolized by '$xA(x, y)$', which means x such that x is a property of y.[3] The thing which may be designated by the lower rectangle Y may be symbolized by '$yB(y, x)$', which means y such that y is a property-possessor of x. Permanent substance, inherence, and absence, which lack the power of inhering in things, can be expressed by '$x\tilde{A}(x, y)$'. Universal, distinction, inherence, and absence, which have nothing inhering in themselves, can be expressed by '$y\tilde{B}(y, x)$'.

Sanskrit expressions corresponding to each symbolic expression are as follows:

(1)	*samaveta*	$xA(x, y)$
(2)	*samavetavat*	$yB(y, x)$
(3)	*samavetatvarahita*	$x\tilde{A}(x, y)$
(4)	*samavetarahita*	$y\tilde{B}(y, x)$

(It should be added that *samaveta* here is used in the sense of *dharmisamavetadharma* [a *dharma* which inheres in its *dharmin*], which may more precisely express the concept overed by the mathematical term $xA(x, y)$.)

These four complex concepts appear often in *LV* and serve as the basic operative elements of Udayana's definitions given in *LV*. Our Texts 5–8 of *LV*, for example, classify categories in terms of *samaveta* and *samavetavat*, which we have examined. Texts 9–12 state four definitions of substance, which are presented in terms of two relations: that between *samaveta* and *samavetavat* and that between absence and the locus of absence. Text 9 defines substance as "that which is not a substratum of the constant absence of quality". Text 10 runs as follows: *mūrtatva-rahita-samaveta-samavetatva-rahita-mūrtatva-rahita-amūrtatva-rahita-samaveta-jātimad vā.* (For a translation of this text, see Part II, Text 9.) One can easily see that in this long compound several basic words, such as '*(a-)mūrtatva* ((in-) corporeality)', '*rahita* (lacking)', and '*samaveta*', are repeatedly used. The word '(in-)corporeality' serves as the so-called key-word of this definition. Here Udayana defines substance in terms of (in-)corporeality and the *samaveta-samavetavat* relation. Text 11 will be discussed shortly. Text 12 is one of the most remarkable examples given by Udayana in *LV*. It runs: *samaveta-samaveta-samavetam.* (For a translation, see Part II, Text 12.) Here Udayana defines substance in the form of a compound which consists only of the word '*samaveta*'. The definitions of categories other than substance may be understood in a similar way.

In *LV* Udayana defines several categories by the same type of definition. Here we shall examine two types of examples: Type I and Type II. The former is used to define substance (Text 11), earth (Text 20), fire (Text 58), and color (Text 131). Text 11 reads:

(1): [Substance] possesses the generic character that inheres in space and a lotus, but not in scent. (*gandhāsamavetagaganāravindasamavetajātimat.*)

When we substitute '*x*' for 'substance', '*y*' for 'the generic character', '*l*' for 'space', '*m*' for 'a lotus', and '*n*' for 'scent' in (1), we get (2).

(2): x possesses y which inheres in l and m, but not in n.

It is easy to see that 'x possesses y' can be rewritten in the system of LV as 'x is inhered in by y'. Hence (2) can be rewritten as (3).

(3): x is inhered in by that which inheres in l and m but not in n.

Let the sign '$\cdot$' represent conjunction. We can then symbolize (3) by (4).

(4): $B\,[x, y\,(A\,(y, l) \cdot A\,(y, m) \cdot \tilde{A}\,(y, n))]$.

In the case of Text 11, y is the generic character 'substance-ness'. Hence, in the definition of Type I, an individual manifestation is defined as 'that which is a locus of generic character'. For example, a substance is a locus which is a locus of substance-ness.

Therefore, any x as described in (4) can be symbolized by (5).

(5): $xB\,[x, y\,(A\,(y, l) \cdot A\,(y, m) \cdot \tilde{A}\,(y, n))]$.

(5) can be rewritten as (6).

(6): $xA\,[y\,(A\,(y, l) \cdot A\,(y, m) \cdot \tilde{A}\,(y, n)), x]$.

The definition of earth (Text 20) reads as follows: [Earth] possesses the generic character that inheres in a horn and in a horse, but not in hailstones. This definition is of Type I. One can attain the same schema as for Text 11, when one substitutes 'x' for 'earth', 'y' for 'the generic character', 'l' for 'a horn', 'm' for 'a horse', and 'n' for 'hailstones'. The remaining three definitions (Texts 41, 58, and 131) can be understood in a similar way.

One can describe the main procedure of Type I definitions as follows:

(1) Udayana chooses three entities.

(2) He shows that there is a common property which resides in two of the three entities but does not reside in the third.

(3) He adds the condition that the common property must be a generic character.

What is most important here is that he picks up two entities which share a generic character. The number two plays a fundamental role in Udayana's system. For the existence of a generic character at least two substrata are required, and the number two is the starting point from which a generic character is established.

One can illustrate the content of Type I definitions as in Figure 3.

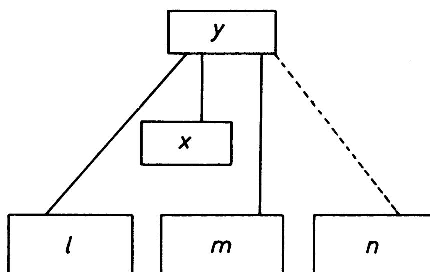


Fig. 3.

Type II is used to define fire (Text 57) and wind (Text 80). The definition of the fire runs as follows: Fire is the locus of the color which has the same loci as the constant absence of taste (*rasātyantābhāvasamānadhikaraṇarūpādhikaraṇaṃ tejaḥ*). Here substance is defined in terms of two relationships: the relation between *samaveta* and *samavetavat* and the relation between absence and its locus. The second is a sort of self-linking relation (*svarūpasambandha*) (cf. Note 1 of Chapter I of Introduction).

Three substances, i.e., earth, water, and fire, serve as the loci of color. The constant absence of taste is found in neither earth nor water, but it is found in fire; fire never has any taste. Therefore, the locus of the color that has the same loci as the constant absence of taste is fire. One may illustrate the content of this definition by Figure 4.

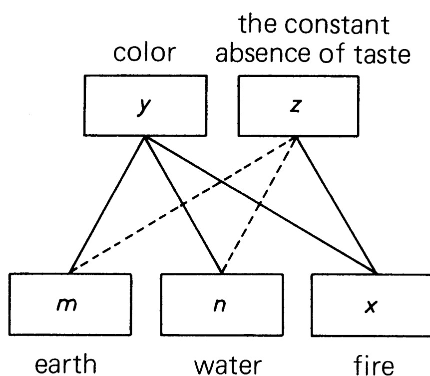


Fig. 4.

In this diagram 'x' indicates what is to be defined, i.e., fire. 'y' indicates color, and 'z' indicates the constant absence of taste. 'm' and 'n' indicate respectively earth and water. Here one should note that, of these three substances (m, n, and x), fire (x) alone is the locus of both color (y) and the constant absence of taste (z).

The content of the definition may be expressed by $A\ \{y, xB\ (x, z)\}$, where the relations of earth (m) and water (n) to color (y) as well as the constant absence of taste (z) are not directly indicated. When one takes these relations into consideration, one can obtain the following schema: $A\ (y, xB\ (x, z)) \cdot A\ (y, m\tilde{B}\ (m, z)) \cdot A\ (y, n\tilde{B}\ (n, z))$.

In a similar way Udayana defines air in Text 80: Air is the locus of the touch (tactile sensation) that has the same lòci as the constant absence of color. (*rūpātyantābhāvasamānādhikaraṇasparśādhikaraṇo vāyuḥ.*) This definition is of Type II. Touch resides in four substances: earth, water, fire, and air. Of these four substances, air alone is the locus of the constant absence of color. Therefore, touch and the constant absence of color share only one locus, i.e., air.

One can describe the main procedure of Type II definitions as follows:

(1) Udayana denotes three (or four) substances by the expression 'the locus of color (or touch)'.

(2) He shows that, of these three (or four) substances, there is only one possibility of color (or touch) sharing the loci of the constant absence of taste (or color).

We have thus examined only two types of definitions given in *LV*. But, as we shall see in the following translation, almost all the definitions given in *LV* have been expressed in a similar way. That is to say, they are given in terms of the predicates 'A' and 'B' and factors such as x and y. In order that schemata, such as '$A(x, y)$' and '$B(y, x)$', be meaningful, the two factors, x and y, must be clearly distinguished from each other. If the distinction between two such factors were obscured, as Nāgārjuna assumed, the schemata given in *LV* would make little sense.

CHAPTER V

DIFFERENTIATION OF CATEGORIES

Introduction to a translation of the *Kiraṇāvalī*

A. THE CONCEPT OF INHERENCE

In Chapter IV we saw that categories, which are classified in terms of the concepts of '*samaveta*' and '*samavetavat*', are related to each other by inherence (*samavāya*). Here we shall examine the concept of inherence discussed in basic Vaiśeṣika works, such as *VS, PBh*, and *KV*.

Kaṇāda, the author of *VS*, defines inherence as "that which produces [the notion, 'This is] in that' with respect to cause and effect". (*VS*, 7.2.29: *iheti yataḥ kāryakāraṇayoḥ sa samavāyaḥ.*)[1] Here one can see that Kaṇāda is defining inherence in terms of two kinds of relations: the relation between the container (*ādhāra*) and the contained (*ādheya*) and the relation between cause and effect. The container-contained relation is expressed in the words, 'This is in that'. But he has not explicitly mentioned by what kind of cause and effect two entities, one of which inheres in the other, are related; nor has he given a satisfactory explanation of the concepts of the container and the contained. Furthermore, he does not speak of qualities, actions, or universals as occurring in their substances by the *samavāya* relation. According to Dharmendra Nath Shastri,

> it appears that after the relation of *samavāya* was established in connection with the theory of causation, its scope was extended to the subsistence of qualities, movement, or universals in their substances.[3]

Candrānanda (about 6th century), who wrote the oldest available commentary on *VS*, takes the words, "with respect to cause and effect" (*kārya-kāraṇayoḥ*) in the above Vaiśeṣika aphorism to include relations between a permanent substance and an ultimate distinction residing in it and between an individual manifestation and a generic character residing in it.[4] One should note here that these two relations included in the relation of causality by Candrānanda are not relations between an instrumental cause and its effect. Thus Candrānanda specifies, if not sufficiently, the cause and effect mentioned by the author of *VS*.

Praśastapāda defines inherence as follows:

> Inherence is the relation between things that are inseparably connected and stand to each other in the relation of the container and the contained, and also inherence is the relation that causes the notion, "[Such and such a thing resides] in this".[5]

He gives the following examples of pairs of entities, one of which inheres in the other: cloth and thread, a mat and Vīraṇa grass (out of which one can make a mat), quality (or action) and substances, existence and substance (or quality or action), substance-ness and substance, quality-ness and quality, action-ness and action, and ultimate distinction and permanent substance.[6] In defining inherence, Praśastapāda seems to have paid more attention to the container-contained relation rather than to the relation between cause and effect. He has realized that the range of the relation of inherence is not equivalent to that of causality. That is to say, he is aware of the fact that two entities, one of which inheres in the other, are not always related by cause and effect. He says:

> Inherence is that which causes the notion, 'This resides in that', with respect to substances, qualities, actions, universals, and distinctions that appear as cause and effect as well as those that do not appear as cause and effect.[7]

Praśastapāda has thus elaborated upon Kaṇāda's definition of inherence.

Śrīdhara, the author of the *Nyāyakandalī* (*NK*), is also aware of the difference between range of the relation of inherence and that of causality. He cites examples of things which appear as cause and effect, and which are also related by inherence:

(1) parts and the whole composed of the parts,
(2) an impermanent substance and its qualities,
(3) a permanent substance and impermanent qualities inhering in it,
(4) a substance and an action residing in it.[8]

He gives examples also of entities which do not occur as cause and effect, but which are nonetheless related by inherence:

(1) a permanent substance and its qualities,
(2) a substance and a universal residing in it,
(3) a substance and an ultimate distinction residing in it.[9]

The editions of *KV* which have been published so far stop in the middle of the section on quality (*guṇa*).[10] Therefore, we lack Udayana's comment on the section on inherence, which in Praśastapāda follows at some distance the

section on quality. However, judging from Udayana's brief explanation of inherence given in earlier parts of *KV*, one may say that Udayana uses a simple but unique method to define inherence. What Praśastapāda understands under 'the container-contained relation' is now dealt with by Udayana in terms of the *dharma-dharmin* relation. Udayana was probably the first thinker to define inherence in terms of the *dharma-dharmin* relation.

According to him, two entities found in the *dharma-dharmin* relation may be said to be in a relation of *effect* and *cause* only if the two entities are found in a relation such that one of them inheres in the other. A whole pot, for example, may be considered as so related to its parts. The whole inheres in each comprising part, hence one can say that the whole is the *dharma* of each part. The whole of a pot and each part are thus found in the *dharma-dharmin* relation. One can see that the cause here, viz., the parts, is the material cause. A potter and a pot are not found in the *dharma-dharmin* relation, even though they are related by cause and effect.

The following passage in *KV* clearly shows that Udayana considers inherence from the point of view of the *dharma-dharmin* relation.

> Earth-ness and the like are lower universals. The property of possessing them [i.e., earth-ness and the like] is their inherence [in earth].[11]

> The property of possessing touch is the inherence of touch [in substance].[12]

Thus Udayana in *KV* understands inherence from the point of view of the *dharma-dharmin* relation. It should be added that the term '*dharma-dharmin* relation' is used here in a narrow sense. Conjunction is, for example, excluded from the extension of the '*dharma-dharmin* relation' here.

B. DIFFERENTIATION IN TERMS OF DEFINITION (*LAKṢAṆA*)

It has been mentioned that categories, which comprise the world and which are connected by inherence, must be different from each other in the Vaiśeṣika system. The need to distinguish categories often leads one to define them individually. The Vaiśeṣikas believe that one can define an entity by means of words. While the Buddhists suffer from the gap between word and object, the Vaiśeṣikas hold that there is no discrepancy between them. According to them to exist is to be an object of words. As long as an entity is an object of words, the entity is one of the factors comprising the world and vice versa.

In *KV* Udayana quotes Uddyotakara's definition of defining character:

"The purport of definition is to differentiate [the thing to be defined] from [both] similar and dissimilar things".[13] In the arguments given in *KV* Udayana follows Uddyotakara in using definition to differentiate that which is to be defined from other things.

For example, if one looks at a pot and begins to ask, "What are the characteristics of this pot?" He might think he knows, if not exactly, the characteristic nature (*svarūpa*) of the pot by common sense or knowledge from experience. Hence, Udayana presupposes that someone might think as follows:

> If the nature (*svarūpa*) of earth is known, what is the use of defining it? If it is known, proving it is senseless. If it is not known, there is nothing to be defined.[14]

Udayana answers as follows:

> No. Although the nature [of earth] is known, it still remains to be proved that this nature differentiates each from other things. Thus:
> Earth differs from water, etc., (Hypothesis)
> because of earth-ness (Reason)
> That which does not differ from other things [such as water] is not earth, like water. (Example)
> It is not the case that this [substance] is not earth. (Application)
> Therefore, [earth] differs from other things [such as water]. (Conclusion)

In this syllogism the *pakṣa* is earth; the mark (*hetu*), earth-ness; and the *sādhyadharma* (the property which is to be proved to exist on/in *pakṣa*), the property of being different from water, etc. A correct mark is supposed to possess the following three aspects:

(1) The mark must be present in the *pakṣa*,

(2) the mark must be present in the *sapakṣa* (that which is similar to the *pakṣa* in that it possesses the *sādhyadharma*.

(3) the mark must not be present in the *vipakṣa* (that which is dissimilar from the *pakṣa* in that it does not possess the *sādhyadharma*.[16]

For example, in the syllogism: There is fire on the mountain, because of smoke, as in a kitchen, the *pakṣa* is the mountain; the *sādhyadharma*, fire; and the mark, smoke. The *sapakṣa* here is that which possesses fire, for example a kitchen, and the *vipakṣa* is that which does not possess fire, for example a lake. One can see that the mark, smoke, satisfies the three conditions mentioned above. Hence, the mark is correct in that syllogism.

Now let us come back to the syllogism in *KV* cited before. The mark, earth-ness, is present in earth. Hence, the mark possesses the first aspect. Does it possess the second aspect? What is the *sapakṣa* in that syllogism? There is nothing that is similar to the *pakṣa* earth in that it is different from water, etc., from other things than earth, and yet not earth. Therefore, the mark in that syllogism, not being present in a *sapakṣa*, does not possess the third aspect, for it is absent in the *vipakṣa*, that which lacks earth-ness. A mark which possesses the first and the third aspects but does not possess the second is called *kevalavyatireki* (that which pertains only to negative concomitance). Thus, the Indian syllogism wherein the mark pertains only to negative concomitance may be formulated as follows:

x differs from that which is not x,	(Thesis)
because of x-ness,	(Reason)
as in the case of y.	(Example)
$(x \neq y)$	

Answering the question, "What is the defining character?" Udayana says, "Defining character is the particular mark pertaining only to negative concomitance".[17] Hence, as we have seen above, according to Udayana, the defining character of earth (*pṛthivī*) is earth-ness (*pṛthivītva*). But the definiens (the defining expression), 'earth-ness', presupposes the meaning of 'earth', which is the definiendum (the expression to be defined) here. This is contrary to the general rules of definition.[18] Therefore, one might think that the statement: Earth is that which possesses earth-ness, cannot be considered a definition of earth.

But one should know that, when Udayana tries to give the defining character of an entity, he neither enumerates all the characteristics of the entity nor describes the entity by examples. For Udayana, to define something (x) means to find a property (y) by which one can distinguish x from the other things in the world. In this case, the domain wherein y may occur must be equivalent to the domain where the property of being x may occur. For example, when one can define earth according to Udayana's system, one should find a property (y) whose domain is equivalent to the domain of the property of being earth. Such a property (y) is earth-ness. In the syllogism in *KV* cited earlier, earth-ness is the *kevalavyatireki* mark, which has no *sapakṣa*. That a mark possesses no *sapakṣa* implies that the domain of the mark is equivalent to that of the property of being the *pakṣa*. For this reason Udayana holds that defining character is *kevalavyatireki*.

As we have seen, for Udayana in *KV*, to define an entity means to eliminate

all the things other than the entity.[19] But how can one distinguish one entity from others? Let us distinguish 'pot-ness', for example, from generic characters of things we can see around us. 'Pot-ness' is distinguish from water-ness, flower-ness, cloth-ness, and so forth. Indeed, one knows that there are many things different from 'pot-ness', but no one has listed all the occurrences of things different from 'pot-ness' in this world. Hence, if one tries to define the generic character 'pot-ness' in this way, one can never make the distinction complete. For this reason Udayana shifts the direction of intention from positive concomitance to negative concomitance. He attempts to find the principle for distinguishing categories in terms of negation.

Here we face a difficulty: if it is impossible to examine all the positive instances between two entities in the world, then it will also be impossible to examine all the negative instances. For example, it would be impossible for anyone to ascertain the validity of the negative concomitance: Where there is no fire, there is no smoke. Udayana, however, seems to have passed this problem to his followers.

C. DIFFERENTIATION IN TERMS OF THE MANIFESTOR-MANIFESTED (*VYAÑ-JAKA-VYAÑGYA*) RELATION

In the last section we saw that, according to Udayana, the defining character of earth is earth-ness. An earth substance and earth-ness, these two elements of the world, are connected by inherence. Praśastapāda explains the relation between earth and earth-ness: [A thing is] earth by its relation to earth-ness.[20] He means that one can recognize an entity as an earth substance by realizing the existence of earth-ness in the entity. Of course, Udayana follows Praśastapāda in accepting that theory. But how is it possible to know the existence of earth-ness in an entity? That is possible because the qualities residing in an entity manifests the existence of the generic character earth-ness in the entity.[21]

We have mentioned that the world as understood by the Vaiśeṣikas is a hierarchical structure composed of simple elements. We should remember that the world as understood by them is also a kind of 'signal system', wherein the existence of one factor acts as the signal indicating the existence of another factor. It is due to this system that one can realize the existence of earth-ness in an individual earth existence.

The Vaiśeṣikas hold that, since a substance possesses qualities peculiar to

it, some qualities can be signals that indicate the existence of the substance in question. According to the Vaiśeṣika system, smell belongs only to earth. Hence it is called the special quality of earth, and manifests the existence of earth-ness in an entity. To given another example, the particular kind of color, taste, or touch, manifests the existence of milk-ness. Thus smell or the particular kind of color, taste, or touch is called the manifestor (*vyañjaka*); earth-ness or milk-ness, the manifested (*vyañgya*). Smell and earth-ness (or the particular kind of color, taste, or touch, and milk-ness) are said to be in the manifestor-manifested relation.

The manifestor-manifested relation is not symmetrical. That is to say, the positions of the manifestor and the manifested cannot be reversed in Udayana's system. Smell manifests the existence of earth-ness in a substance, but earth-ness is not considered to manifest the existence of smell. Generally qualities residing in a substance manifest the existence of a generic character residing in the substance.[22] One should note that smell does not manifest the existence of an individual earth substance directly. Qualities manifest the existence of a general character residing in a locus, then through the inherence of that generic character one identifies the locus itself. It should be added that categories, such as substance, absence, and inherence, cannot manifest the existence of other categories.

Smell is also the establishing cause (*vyavasthākāraṇa*) of earth-ness. The special quality of earth establishes earth-ness residing in each substance made of earth, insofar as it manifests the existence of earth-ness in each earth substance. Smell alone can be the establishing cause of earth-ness, even though thirteen other qualities are supposed to reside in earth. According to Udayana, the thirteen qualities accompanied by smell are not capable of manifesting the existence of earth-ness.[23]

Each substance possesses a generic character manifested by its special quality. The color that is not shining and does not disappear may be the manifestor of the existence of water-ness. Viscidity also may manifest the existence of water-ness, since it belongs only to water. Similarly, the color that is shining and white may manifest the existence of fire-ness.

The special quality that establishes a universal distinguishes the category possessing the universal from other categories. To use the already familiar example, smell is the distinguisher (*vyavacchedahetu*) of earth from other categories, such as water and fire.[24]

Thus, one can see that a manifestor, an establisher, and a distinguisher possess the same function in the epistemological hierarchy as understood by the Vaiśeṣikas.

D. DIFFERENTIATION OF QUALITIES FROM OTHER CATEGORIES

According to the traditional Vaiśeṣika doctrine, the six or seven categories (*padārtha*) should be clearly distinguished from each other. By the time of Udayana, however, there had appeared philosophers who did not accept this traditional view. For example, Bhāsarvajña, who was an immediate predecessor of Udayana, did not regard action to be an independent category; as we have already seen (p. 26), he considered it as a kind of quality. Bhāsarvajña thus challenged the so-called traditional thinkers. Udayana, who wanted to follow the traditional way established by Praśastapāda, felt the necessity to criticize this new kind of view.

In order to differentiate between categories, Udayana makes good use of several methods with which his predecessors, such as Praśastapāda and Śrīdhara, were not seriously concerned. Udayana differentiates qualities from other categories on the grounds that qualities alone may possess gradation (*tāratamya*). Perhaps Udayana was the first thinker in the history of Nyāya-Vaiśeṣika philosophy to use this method effectively.

The color white, for example, has gradation or differences in degree, so that a thing may be white, more white, or most white. In a similar way, a thing may be sweet, more sweet or most sweet. On the other hand, the generic character 'flower-ness', for example, cannot be 'more-flower-ness' or 'most-flower-ness'.

In the section on water in *KV* (cf. Text 5) Udayana proves by means of the concept of differences in degree that viscidity is not a universal but a quality. To the objection that viscidity is an intermediate universal found in individual earth substances, such as butter, oil, fat, Udayana gives this reply:

> That is not correct, because there are degrees of viscidity, as a thing is viscid, more viscid, and so on. There are no degrees of cows, buffaloes, etc., without reference to qualities. We do not say that something is 'slightly cow' or 'very cow' in the way we say that something is slightly sweet, very sweet, and so on. Therefore, as differences in degree (*atiśaya*) are limited to qualities and cannot obtain in a universal by its being an intermediate universal, viscidity must be a quality.[25]

E. DIFFERENTIATION IN TERMS OF 'COOKING' OR CHANGE DUE TO HEAT (*PĀKA*)

Qualities are divided into two groups in various ways from different points of view. To give a few examples, they are divided into those which result from

'cooking' (or heating) and those which do not, and also into disappearing qualities and undisappearing ones. Again, conditional qualities are distinguished from natural ones. These divisions are utilized to differentiate between categories in the Vaiśeṣika system. Here I would like to examine the differentiation of categories on the grounds that some qualities result from 'cooking' and some do not.

'Pāka', which literally means the action of cooking, is often rendered as 'ripening change' or 'chemical change'. It is a special kind of conjunction with the fire elements through which the color, taste, and smell, of earth atoms disappear and another color, taste, and smell, appear in their place.[26]

The author of *VS* seems to have been rather indifferent to the problem of 'cooking'. The text of *VS*, included in a commentary called the *Upaskāra*, mentions 'cooking' only once (7.1.6.); and the text of *VS*, included in Candrānanda's commentary, mentions it three times (7.1.10, 11, 13.). Candrānanda's explanations of 'cooking' are very brief. The author of the *Daśapadārthī* (seventh century) pays little attention to the problem of 'cooking'. Praśastapāda, however, is seriously concerned with 'cooking'. He fully explains 'cooking' in connection with his explanation of touch.[27] Here again Udayana inherits the tradition of Praśastapāda in admitting the significance of 'cooking' in the Vaiśeṣika philosophy.

If butter, which is made of earth, is heated intensely for a long time, it will burn and become black. On the other hand, even if water and gold are heated intensely for a long time, their color will remain the same. In a similar way, the taste of butter will be changed when burned, but the taste of water never becomes different even when heated for a long time. Therefore, it follows that the nature of the color of earth differs from that of the color of water. The taste of earth also differs from that of water in nature. The Vaiśeṣikas hold that this difference is due to the fact that the color and taste of earth result from 'cooking' (*pākaja*) and the two qualities of water and the color of fire do not (*apākaja*).

Thus, the color, taste, smell, and touch of earth result from 'cooking'. According to Udayana, it is obvious that the first three result from 'cooking'.[28] He explains why the touch of earth should result from 'cooking' as follows:

> If [the touch of earth] did not result from 'cooking', it would be unqualified (*aviśiṣṭa*, i.e., the same in all instances), just as number, measure, etc., and likewise there would be no particular pain when one touches the fangs [or the stinger, etc.,] of a snake, a scorpion, a worm, etc., or

> [sharp edges of] *śūkasimbi* (cowach), *vṛścikapāttrikā* (nettle), etc. Moreover, the pain would not disappear even when one touched particular things such as magic gems and healing roots. There would be neither the injunction to touch cows, etc., nor the prohibition against touching outcastes, etc.[29]

One can see that 'cooking' goes further than changes caused by differences in temperature. Thus reactions which result, or are supposed to result, from the action of touching some entity are explained by Udayana through the concept of 'cooking'.

Just as *pākaja* qualities are distinguished from *apākaja*, disappearing qualities are distinguished from undisappearing. This distinction is also utilized to distinguish substances.

For example, butter, which is an earth substance, becomes fluid when heated, and its fluiditiy disappears as it is heated more and more. Finally the butter will be burned. Gold, too, becomes fluid when heated, but Indians thought its fluidity never disappeared. In other words, it will not be burned. Neither will the fluidity of water disappear. The distinction between disappearing fluidity and undisappearing may be used to differentiate earth substances from fire or water substances.

F. DIFFERENTIATION OF SUBSTANCES (*DRAVYA*)

The structure of the world as understood by the Vaiśeṣikas is based upon substance, since substance alone can be the material cause of the world. Other categories, such as quality, action, and universal, can be elements of the world insofar as they rest upon substances. One shuld note that a substance may inhere in another substance. For example, a pot inheres in its halves. It is only in the case of substance that inherence may relate members of the same category.

The Vaiśeṣikas divide substances into permanent substances and impermanent ones. Permanent substances take the form of a separate atom; impermanent ones, that of an aggregate of atoms, such as a pot or a cow. Substances can be neither exclusively impermanent nor exclusively permanent. There must be two kinds of substances. Udayana says:

> If earth were exclusively impermanent, there would be an infinite series of parts. If any part of some [final whole] were completely destroyed, a product [which requires that part but lacks it] would lack its substratum.[30]

According to the atomic theory of the Vaiśeṣikas, if a substance is impermanent, it can be divided into parts. Hence, if all earth-substance were impermanent, any part of an earth-substance could be divided infinitely. Every product, however, has for its substratum atoms, which are permanent. If earth were exclusively impermanent, there would be no atoms, and accordingly a product would be without its substratum. Udayana continues:

> If earth were exclusively permanent, there would be no means for knowing it, ...[31]

Udayana holds that one can infer the existence of an atom through a product whose existence can be easily known by perception. Hence, if earth were exclusively permanent (if earth took only the form of isolated atoms), one would have no means of ascertaining the existence of earth.

Udayana characterizes an atom as follows:

> Thus, since we have proved that the proposition "that which is a product has parts" reversible [i.e., "that which is not a product lack parts" is also true], we may begin by showing something [i.e., a triad] to possess parts because of its being a product and go on until the property of being a product ceases with a [final] part. We may then show that this part is partless and is the ultimate atom.[32]

Thus an atom is

(1) without parts,
(2) without the property of possessing more than one substance,
(3) without the property of being a product, and
(4) not large.

A triad is the first point where an aggregate of atoms becomes 'visible' (*cākṣuṣa*) in the process of the formation of objects, such as a pot or a cow. Though not an atom and a triad are substances, they differ in nature in almost every aspect. A triad is

(1) with parts,
(2) with the property of possessing more than one substance,
(3) with the property of being a product, and
(4) large.

Udayana does not hold that a triad is composed of two ultimate atoms (*paramāṇu*), for the atom has no largeness (*mahattva*). If it did, it would be divided; and an atom is defined as indivisible. Why must the parts of the triad have largeness? Because a triad is larger than its parts. Otherwise, we could see its parts. Its cause could not make it larger unless its cause already was large.

Thus Vaiśeṣika philosophers, such as Udayana, were forced to infer an intermediary substance, the diad (*dvyaṇuka*), as the link between an atom and a triad in the formation of aggregates of atoms.

Śrīdhara, Udayana, and others hold that two atoms compose a diad and that three diads compose a triad. Kaṇāda, however, does not state that aggregates of atoms are formed through the diad-triad process. From the arguments given in *PBh* alone, we cannot judge whether or not the theory of the diad-triad process of formation was in existence in Praśastapāda's time. Udayana in *KV* refutes the opinion that atoms directly compose a triad without undergoing the diad-triad process.[33] The *Prakaṭārtha* quoted in the *Ratnaprabhā*, which is Govindānanda's commentary on Śaṅkara's *Brahmasūtrabhāṣya* (2.2.11.), states that three isolatded atoms compose a triad, and that in a similar way four atoms compose a *caturaṇuka.*[34] But the theory of the diad-triad process is commonly accepted in the late Nyāya-Vaiśeṣika philosophy as seen in the *Nyāyasiddhāntamuktāvalī* (*NSM*)[35] or the *Tarkadīpikā* (*TD*).[36]

A diad is

(1) with parts,

(2) with the property of possessing more than one substance, and

(3) with the property of being a product.

Then how do the atoms, possessing no largeness, produce largeness? The number of the atoms produce the largeness of the diad. This diad, possessing largeness, is capable of combining with other diads to make a substance larger than a diad, in fact larger enough to be seen. This is the triad.

A triad and each of six atoms comprising the triad are found in the relation between a whole and its parts. According to Udayana, the requirement that a whole have its parts, i.e., that if a whole has parts, the parts must be wholes which in turn possess parts, is

(1) not *niravadhi*, i.e., not without an end,[37]

(2) not *pralayāvadhi*, i.e., not able to continue to complete dissolusion i.e., at a point where there remains something so small that it is nothing,[38]

(3) not *vibhāgāvadhi*, i.e., not able to continue beyond the disjunction (In other words, this implication continues as long as there is disjunction),[39] and

(4) *niravayavāvadhi*, that is to say, ends with [i.e., does not apply to] that which possesses no part.[40]

One can see that in the Vaiśeṣika system clear distinctions are made among the material causes of the world, i.e., substances, in terms of the relation between a whole and its parts. A whole inheres in its part, and a whole and its part are found in the *dharma-dharmin* relation. Hence, impermanent substance

inheres in permanent substance, and these two must be distinguished from each other so that the *dharma-dharmin* relation and accordingly the category of inherence are established.

G. DIFFERENTIATION OF UNIVERSALS (*SĀMĀNYA*) – GENERIC CHARACTER (*JĀTI*) AND IMPOSED PROPERTY (*UPĀDHI*)

Udayana distinguishes universals (*sāmānya*) called 'generic character' (*jāti*) from those called 'imposed property' (*upādhi*). He holds that substance-ness, earth-ness, cow-ness, etc., are generic characters, and the state of being an element (*bhūtatva*) and the state of being corporeal (*mūrtatva*), etc., are imposed properties.

The domain where the generic character water-ness is found does not cross into the domain where the generic character earth-ness is found. On the other hand, both of them are completely included in the domain of substance-ness. Thus the domains of the generic characters residing in a substance must fail into one of the following relations: (1) the domain of one generic character is completely exclusive of the other or (2) one domain subsumes the other completely. Thus, the domain of one generic character cannot cross into the domain of any other generic character. The domain of an imposed property, however, can cross into that of another imposed property. For example, the state of being an element (*bhūtatva*) is found in space but not in mind, while the state of being corporeal (*mūrtatva*) is found in mind but not in space.[41]

In a similar way, Udayana does not consider the state of being a body (*śarīratva*), the state of being a sense-organ (*indriyatva*), or the state of being an object (*viṣayatva*) to be of a generic character,[42] for if this were the case, there would be a mixture (or cross-connection) of generic characters (*jātisaṃkara*). Earth-ness, for example, is found in a pot, but the state of being a body is not. The state of being a body is found in a body made of water atoms (it is supposed that such bodies exist in the world of Varuṇa), while earth-ness is not. Thus, the domain where earth-ness is found crosses into the domain where the state of being a body is found. Therefore, earth-ness can be said to be neither higher nor lower than the state of being a body. The relation between earth-ness and the state of being a sense-organ can be explained in a similar way. According to Udayana, not only a pot, cloth, etc., but also universals and absence are objects. Someone might hold that 'object-ness' could exist as a generic character in a universal or in absence, but the Vaiśeṣika doctrine does not allow a universal or absence to possess its own generic character. Thus, Udayana maintains that there would be a

mixture of generic characters if the state of being an object were a generic character.

Udayana thus holds that a mixture of generic characters is an impediment to a generic character (*jātibādhaka*). The purport of this theory is to maintain the presupposed differences among factors comprising the world.[43]

H. THE HIERARCHY OF GENERIC CHARACTERS

In the Vaiśeṣika system generic characters constitute a hierarchical order determined by the extent of their domains. In this hierarchy the highest generic character (*parajāti*) is existence (*sattā*), all other generic characters being called 'lower' (*apara*). Lower generic characters consists of substance-ness (*dravyatva*), earth-ness (*pṛthivītva*), pot-ness (*ghaṭatva*), etc. These lower generic characters hold intermediate positions in the hierarchy of generic characters. Earth-ness, for example, is placed higher than pot-ness but lower than substance-ness. To use Western terminology, the extension of the term 'earth' includes a pot, cloth, etc., which are made of earth, and excludes water, fire, etc., which are not earth-substances. Hence lower generic characters are also described as including and excluding generic characters.

Various generic characters reside in an individual object. For example, existence, substance-ness, earth-ness, pot-ness reside in a pot. One can illustrate the relations between these generic characters and their locus, a pot, as follows. (See Figure 5, where semicircles *a, b, c,* and *d* indicate respectively the domains of pot-ness, earth-ness, substance-ness and existence.)

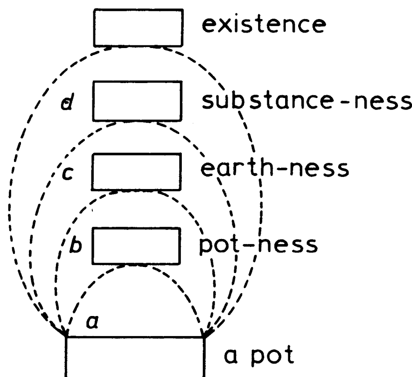


Fig. 5.

As one can see in this figure, existence is higher than substance-ness, which is higher than earth-ness, which is higher than pot-ness.

When a pot is broken into pieces, it is no longer a pot. Therefore, the generic character pot-ness does not reside in the pieces, but existence, substance-ness, and earth-ness still do. Let us continue dividing one of the pieces. According to Udayana, one can reach a point where it is impossible to divide a small piece into parts. That is to say, one reaches the level of an atom. What generic characters reside in one of the atoms comprising a pot? Udayana holds that an earth atom does not possess any generic character lower than earth-ness.[44] An isolated atom cannot possess generic characters, such as pot-ness and cloth-ness. If separate earth atoms did possess pot-ness, all the products composed of earth atoms would be pots.[45] This, of course, is not the case. At some point in the formation of aggregates of atoms, pot-ness or cloth-ness comes to reside in them.

According to Udayana, a thing is said to be blue through its relation to blue-ness, just as a thing is called 'earth' through its relation to earth-ness.[46] Udayana thus treats the relation between a quality and its generic character in the same way as he did the relation between a substance and its generic character. As seen in Figure 6 there is a hierarchical order in the generic characters residing in the color blue. Existence is the highest as before. (See Figure 5.) Color-ness is lower than existence but higher than blue-ness.

We have mentioned that in Udayana's system a mixture of generic characters is an impediment to a generic character. But we should remember

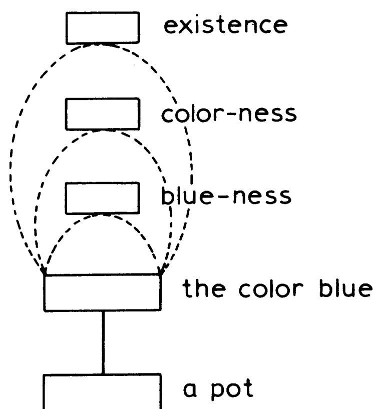


Fig. 6.

that the domain of a generic character residing in a quality, for example, blue-ness, may cross into that of a generic character residing in a substance, for example, earth-ness. Otherwise, there will be no blue pot in the world. This type of mixture of generic characters is, however, not an impediment to a generic character, for the hierarchy of generic characters residing in a substance is considered to be independent of that of generic characters residing in a quality. Existence is, of course, common to those hierarchies. (See Figure 7.) Each generic character thus holds its determined position in the constructural system of the world.

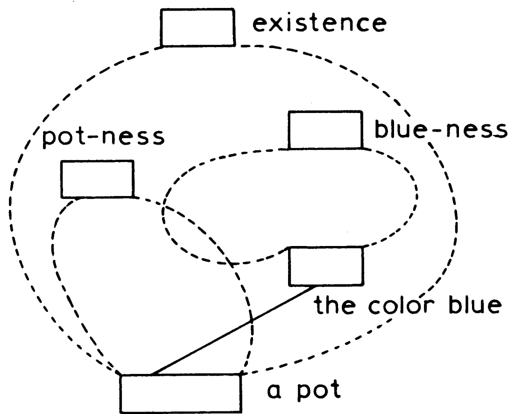


Fig. 7.

CHAPTER VI

CONCLUSION

(A) In the Vaiśeṣika tradition, Udayana held that the world is composed of a certain number of categories (*padārtha*). An infinite number of individual manifestations are included in each category such as substance, quality or action. The factors comprising the world must be distinguished from each other. In order to maintain the presupposed differences between comprising factors, Udayana introduced theories which are new but not contrary to those of Praśastapāda. Differentiation of categories is one of the primary concerns of Udayana in the *Kiraṇāvalī*, which is a commentary on the *Praśastapādabhāṣya*.

The factors comprising the world are connected by inherence, which Udayana has defined in terms of the *dharma-dharmin* relation. In his system *dharma* must be distinguished from *dharmin* so that the category of inherence is established. The clear distinction between *dharma* and *dharmin* has become the basis of the hierarchical structure of the world. Differentiating substance, quality, action, etc., from each other, may be called 'horizontal differentiation'. What is important is that the differentiation of this type is made in terms of the differentiation between *dharma* and *dharmin*, which may be called 'vertical differentiation'. The differentiation of the second type is used especially in the *Lakṣaṇāvalī*, which may be regarded as a list of all the factors comprising the world. It is in this work that the relation between absence and its locus is considered to be a *dharma-dharmin* relation.

The world as understood by the Vaiśeṣikas may be compared to a mobile hanging from the ceiling. A number of forms, for example, fish, hanging by threads move slowly without becoming entangled with each other. If one thread becomes entangled with another, the entire mobile will lose its balance. The threads connecting the forms may be compared to inherence; and the entanglement of these threads, to the mixture of generic characters.

The structure of the world is thus described in terms of series of parts of entities subsisting in the *dharma-dharmin* relation. The definition of each component reflects the entire structure of the world. In this system to define an entity means to point out the position of the entity in the entire structure, wherein entities are arranged in the *dharma-dharmin* relation.

The definition of components of the world has the basic forms:

(   ) is that which inheres in things, and
(   ) is that which has things inhering in it.

For example, a generic character is that which inheres in its individual manifestation. A substance is that which has things, such as qualities and actions, inhering in it. In these examples, an entity is described as that which possesses one category, but usually an entity is described as that which possesses more than one category. For example, that which we call a 'white-cow' is described as that which possesses the generic character of cow-ness and the quality of the color white. (That an entity possesses cow-ness and the color white implies that the entity possesses also earth-ness, substance-ness, quality-ness, existence, etc.)

One may represent a white cow as a member of the class of white cows, and also one may postulate the existence of the property of being a white cow. In modern Western logic, the class of white cows is the totality of the objects possessing the property of being a white cow, or of the object x for which the expression 'x is a white cow' is true.[1] The Vaiśeṣikas, however, did not admit the existence of a generic character such as 'white-cow-ness'. A generic character must not be a complex. According to the Vaiśeṣikas, a white cow is considered to be a complex of the generic character cow-ness and the quality the color white, and their locus substance, etc. The Vaiśeṣikas hold that cow-ness or the color white is a simple unit.[2]

One of the main reasons why scholars have often said that Indian logic is intensional seems to be the fact that Indians described the structure of the world in terms of the *dharma-dharmin* relation, which is one of the commonest thinking patterns in Indian logic. The thinking pattern of the *dharma-dharmin* relation allowed Indian philosophers to describe the structure of the world by 'intension' rather than by 'extension'.

(B) The doctrine of Mahāyāna Buddhism was established by Nāgārjuna (A.D. 150–250), and the major schools of Indian logic (the Nyāya and the Vaiśeṣika schools) were founded some time between the time of Christ and A.D. 200. The ten centuries from the beginning of Mahāyāna Buddhism to the disappearance of Buddhism from India saw a series of arguments between Buddhist logicians and Hindu orthodox logicians.

These arguments may be characterized as conflicts between 'realists' and 'nominalists'. The former accepted not only the objective reality of universals but also the existence of substances separate from other categories, such as qualities and actions. On the other hand, the latter accepted neither set as independents. One can describe differences between the theories of these two

currents in terms of differences in attitudes towards the *dharma-dharmin* relation: Realists sought to distinguish the *dharma* from the *dharmin* clearly while nominalists tried to obscure the borderline between the two.

Philosophers in ancient and medieval India considered the world as a complex possessing a certain structure. Buddhists, who represented anti-Hindu currents of thoughts, were no exceptions. Provided that Buddhists had inherited that tradition, they endeavoured to lessen the distance between the *dharma* and the *dharmin* by destroying the hierarchical order of the world. Realist, such as the Nyāya-Vaiśeṣikas opposed the Buddhists by believing in the existence of the ontological hierarchy of the world. After the arguments which lasted between the Buddhists and the Nyāya-Vaiśeṣikas for eight or nine centuries, the Nyāya-Vaiśeṣikas won. It was Udayana who dealt the fatal blow to Buddhist philosophy.

Udayana's description of the world's structure furnished the theoretical basis for his proof of the existence of God. The Vaiśeṣika philosophy, which was somewhat indifferent to theism in its earlier stage, was now applied to theology. Udayana's philosophy in medieval India may be compared to the theological system of Thomas Aquinas, wherein philosophy is a rational approach to the realities of God's world.[4] Furthermore, this analogy may be extended to the thought of Chu Tsu, who explained the world in terms of a hierarchical order and gave a feudalistic model of thought to medieval China.

NOTES AND REFERENCES

CHAPTER I

[1] Besides inherence (*samavāya*) and conjunction (*saṃyoga*), there is a third kind of relation called *svarūpasambandha* (self-linking relation, lit., the relation having its own form) according to the Nyāya-Vaiśeṣika system. For example, when there is fire on a mountain through conjunction, the conjunction should be connected to the pair of substances, i.e., fire and the mountain. It is inherence that connects the conjunction to the pair of substances. In addition, there should be (1) one relation which connects the inherence to the pair of substances, and (2) another relation which connects the inherence to the conjunction. These two relations are considered by the Nyāya-Vaiśeṣikas to be self-linking ones. This form of self-linking relation, however, plays little role in the arguments given in Udayana's *Lakṣaṇāvalī* (*LV*) and the sections on earth, water, and fire of Udayana's *Kiraṇāvalī* (*KV*), which we are going to treat. Therefore, in our discussion we can neglect the problems of this type of self-linking relation.

This is not to be confused, however, with another self-linking relation, i.e., the relation between an absence and the locus of the absence. An absence is considered to be related to its locus by a self-linking relation. This absential *svarūpa* relation (*abhāvīya-viśeṣaṇatā*) plays a very important role in Udayana's system, especially, in that of the *Lakṣaṇāvalī*. Cf. D. H. Ingalls, *Materials for the Study of Navya-Nyāya Logic* (Cambridge, Mass., 1951), p. 41; B. K. Matilal, *The Navya-Nyāya Doctrine of Negation* (Cambridge, Mass., 1968), pp. 42–43; K. H. Potter, *The Padārthatattvanirūpaṇam of Raghunātha Śiromaṇi* (Cambridge, Mass., 1957), pp. 8–9.

[2] One might be tempted to translate the term '*jāti*' as 'class' in a nominalistic sense. But this translation cannot indicate the important difference between Indian logic and Western logic, with which we are concerned. Here it should be added that '*jāti*' may mean a caste (e.g., *brāhmaṇajāti*) or species (e.g., *puṣpajāti*). In such a case, the word indicates a class consisting of its members rather than a generic character residing in each member. Cf. B. K. Matilal, 'The Intentional Character of Lakṣaṇa and Saṃkara in Navya-Nyāya', *Indo-Iranian Journal* 8, 88; ibid., *Epistemology, Logic, and Grammar in Indian Philosophical Analysis* (Mouton, The Hague-Paris, 1971), p. 71ff.

[3] Cf. D. H. Ingalls, *Materials for the Study of Navya-Nyāya Logic* (Harvard University Press, Cambridge Mass., 1951), p. 40.

[4] Cf. J. F. Staal, 'Correlations between Language and Logic in Indian Thought', *Bulletin of the School of Oriental and African Studies* 23.

[5] J. F. Staal, 'Reification, Quotation and Nominalization', *Bulletin of the School of Oriental and African Studies* 21.

[6] Cf. H. Kitagawa, 'A Note on the Methodology in the Study of Indian Logic', *Journal of Indian and Buddhist Studies* VIII (1960), p. 383.

[7] Cf. D. Sharma, *The Differentiation Theory of Meaning in Indian Logic* (Mouton, 1969), p. 11.

CHAPTER II

[1] C. Goekoop, *The Logic of Invariable Concomitance in the Tattvacintāmaṇi* (Reidel, Dordrecht, 1967), preface.

[2] D. H. Ingalls, 'Logic in India', *Encyclopaedia Britannica*, Vol. 14 (Encyclopaedia Britannica, Inc., Chicago, 1963), p. 311.

[3] M. Hattori, *Dignāga, On Perception*, Harvard Oriental Series, Vol. 47, p. v.

[4] H. Ui, 'Sanron Kaidai (Introduction to the Three Basic Madhyamaka Works)', *Kokuyaku Daizōkyō* (*Japanese Translation of Tripiṭaka*), Sutra Part Vol. 5 (Kokumin-bunko Kankōkai, Tokyo, 1920), p. 18.

[5] Y. Kajiyama, 'Bhavaviveka, Sthiramati and Dharmapāla', *Wiener Zeitschrift für die Kunde Süd- und Ostasiens und Archiv für Indische Philosophie*, Band XII–XIII, p. 200.

[6] Taisho Shinshu Daizokyo (T), No. 1565.

[7] Y. Ueda, *Daijō Bukkyō Shisō no Konpon Kōzō* (*Fundamental Structure of Mahāyāna Thought*) (Hyakkaen, Kyoto, 1957), p. 60.

[8] H. Nakamura, *Indo Shisō no Shomondai* (*Problems in Indian Thought*) (Shunjusha, Tokyo, 1967), p. 577.

[9] S. Dasgupta, *A History of Indian Philosophy* (Cambridge University Press, Cambridge, 1951), Vol. I, p. 325.

[10] S. C. Vidyabhusana, *A History of Indian Logic* (Calcutta University, Calcutta, 1921), p. 143.

[11] Ibid., p. 143; D. Bhattacharya, *History of Navya-Nyāya in Mithilā* (*HNM*) (Mithilā Institute, Darbhanga, 1958), p. 31; *ATV*, p. 296.

[12] Cf. Part I, Chapter III, B.

[13] Th. Stcherbatsky, *Buddhist Logic* (Dover Publication, Inc., New York, 1962), Vol. 1, p. 48. Cf. B. K. Matilal, *Epistemology, Logic, and Grammar in Indian Philosophical Analysis* (Mouton, The Hague-Paris, 1971), p. 63.

[14] H. Kitagawa, *Indokoten Ronrigaku no Kenkyū* (A Study of Classical Indian Logic) (Suzuki Foundation, Tokyo, 1965), p. 21.

[15] D. N. Shastri, *Critique of Indian Realism* (Agra University, Agra, 1964), p. 78.

[16] Ibid., p. 79.

[17] It is true that Nāgārjuna did not discuss the non-reality of universals or inherence. In Buddhism such a problem was discussed especially by later logicians, such as Dharmakīrti. Yet one may call Nāgārjuna 'nominalistic', insofar as he did not admit a clear distinction between *dharma* and *dharmin*.

[18] Louis de la Vallée Poussin (ed.), *Mūlamadhyamakakārikās de Nāgārjuna avec la Prasannapadā Commentaire de Candrakīrti*, Bibliotheca Buddhica IV (St. Petersburg, 1931), p. 162.

[19] Ibid., p. 94.

[20] Ibid., p. 92.

[21] Ibid., p. 115.

CHAPTER III

[1] S. Gosvamin (ed.), 'The Lakṣaṇāvalī of Udayanācārya', *Paṇḍit* 22 (1900), p. 72.

[2] Vidyavacaspati, and Sri Sasinatha (ed.), *Lakṣaṇāvalī* (Darbhanga, Mithila, 1963), p. ii.

[3] *HNM*, p. 51.

[4] See BIBLIOGRAPHY.

[5] *HNM*, p. 13.

[6] *HNM*, p. 8.

[7] G. Kaviraj, *Gleanings from the History and Bibliography of the Nyāya-Vaiśeṣika Literature* (Indian Studies, Calcutta, 1961), p. 65.

[8] Vallabhācārya's *Nyāyalīlāvatī* (*NLV*), (Ch. S.S., Nos. 355, 379, 387, 400, 407, 409, 412, 422), Śaṅkara Miśra's *Kaṇādarahasya* (Ch. S.S., Nos. 231, 255), *Praśastapādabhāṣyasamālocana* together with *Tarkālaṃkarabhāṣyaparīkṣā* (Ch. S.S., No. 255) are rather independent works but they are based upon *PBh*.

[9] Svāmī Yogīndrānanda (ed.), *Nyāyabhūṣaṇam* (Ṣaḍdarśana Prakāśana Pratiṣṭhānam, Vārāṇasi, 1968), intr., p. 3.

[10] Cf. *KV* (Ben. S.S. work 9), 43.11.

[11] G. Kaviraj, *Gleanings from the History and Bibliography of the Nyāya-Vaiśeṣika* (Indian Studies, Calcutta, 1961), p. 29.

[12] *NLV*, p. 131 (on the color of water), p. 132 (on the taste of water), p. 134 (on the touch of water), p. 149 (on the color of fire), p. 150 (on the touch of fire).

[13] Cf. G. Kavirāja (ed.), the *Kiraṇāvalī Prakāsa Dīdhiti* Princess of Wales Sarasvatī Bhavana Texts, No. 38 (Vidya Vilas Press, Benares, 1932), appendix; S. Bhaduri, *Studies in Nyāya-Vaiśeṣika Metaphysics* (Bhandarkar Oriental Research Institute, Poona, 1947), p. 66.

[14] Sri Sasinatha Jha (ed.), *Lakṣaṇamālā of Udayanācārya* (Mithila Institute, Darbhanga, 1963), pp. 9–19.

[15] Ibid., pp. 22–24.

[16] Ibid., intr. p. 4.

[17] Ibid., pp. 37–85.

[18] G. Bhattacharya, *Studies in the Nyāya-Vaiśeṣika Theism* (Sanskrit College, Calcutta, 1961), p. xii.

[19] Cf. *LV*, Text 115–116.

[20] S. Dasgupta, *A History of Indian Philosophy* (Cambridge University Press, 1951), Vol. 1, p. 325.

[21] *NV*, 4.1.21; *NVTT*, 4.1.21. Cf. D. H. Ingalls, 'Human Effort versus God's Effort in the Early Nyāya (*NS* 4.1.19–21)', *Dr. S. K. Belvalkar Felicitation Volume* (Motilal Barnasidass, Delhi, 1957), pp. 230–235.

CHAPTER IV

[1] Cf. Note to Text 1 of *LV*.

[2] J. F. Staal, Review of *The Navya-nyāya Doctrine of Negation* (B. K. Matilal), *Indo-Iranian Journal* XIII (1971), p. 200.

[3] Cf. J. F. Staal, 'Corrleations between Language and Logic in Indian Thought', *Bulletin of the School of Oriental and African Studies* 23 (19), p. 110.

[4] Here I use the P-1 and the M editions as the basic text.

CHAPTER V

[1] Muni Jambuvijayi (ed.), *Vaiśeṣikasūtra of Kaṇāda* (*VS*) ('Gaekward Oriental Series', No. 136), p. 61.

[2] Dharmendra Nath Shastri, *Critique of Indian Realism* (Agra University, Agra, 1964), p. 377.

[3] Ibid., p. 377.

[4] Muni Jambuvijayi (ed.), *Vaiśeṣikasūtra of Kaṇāda* (Gaekward's Oriental Series, No. 136), p. 61.

[5] *PBh*, p. 324: *ayutasiddhānām ādhāryādhārabhūtānāṃ yaḥ sambandha ihapratyaya-hetuḥ.*

[6] Ibid., p. 325.

[7] Ibid., p. 325: *dravyaguṇakarmasāmānyaviśeṣāṇāṃ kāryakāraṇabhūtānām akārya-kāraṇabhūtānām . . . ihedam iti buddhir yato bhavati.*

[8] *NK*, p. 325.

[9] Ibid., p. 325.

[10] The G. O. S. edition (G) stops in the middle of the section on inertia (*saṃskāra*), while the Benares edition (B) and the Bibliotheca Indica edition (N) end in the middle of the section on knowledge (buddhi). As for manuscripts of the *Kiraṇāvalī*. See *New Catalogus Catalogorum*, Madras, Vol. 4, pp. 153–156.

[11] *KV*, (B) 34, 9: *aparā jātiḥ pṛthivītvādikā tadvattā tatsamavāyaḥ.*

[12] *KV*, (B) 176, 6: *sparśavattvaṃ sparśa samavāyaḥ.*

[13] *KV*, (B) 42, 5.

[14] *KV*, (B) 41, 11.

[15] *KV*, (B) 41, 13.

[16] Cf. M. Tachikawa, 'A Sixth-century Manual of Indian Logic', *Journal of Indian Philosophy* I (1971), pp. 116ff.

[17] *KV*, (B) 42, 14.

[18] L. S. Stebbing, *A modern introduction to Logic* (Harper & Row, New York, 1961), p. 422.

[19] One can say the same thing in the case of *L V*. See *L V*, Text 184 and 185.

[20] *PBh*, p. 27.

[21] *K V*, (B) 46, 16.

[22] Cf. *K V*, (B) 69, 8.

[23] *K V*, (B) 44, 11.

[24] Cf. *K V*, (B) 67, 7.

[25] *K V*, (B) 68, 12.

[26] U. Mishra, *Conception of Matter* (The Allahabad Law Journal Press, Allahabad, 1936), p. 75.

[27] *PBh*, pp. 106–107.

[28] *K V*, (B) 49, 2.

[29] *K V*, (B) 49, 7.

[30] *K V*, (B) 50, 3.

[31] *K V*, (B) 50, 5.

[32] *K V*, (B) 53, 5.

[33] *K V*, (B) 63.7.

[34] E. Kanakura, *Indo no Shizen Tetsugaku* (*Natural Philosophy in India*) (Tokyo, 1971), p. 32. Cf. U. Mishra, *Conception of Matter* (The Allahabad Law Journal Press, Allahabad, 1936), p. .

[35] *NSM*, ad. v. 36.

[36] *TD*, p. 9.

[37] *K V*, (B) 51, 2.

[38] *K V*, (B) 51, 5.

[39] *K V*, (B) 51, 7.

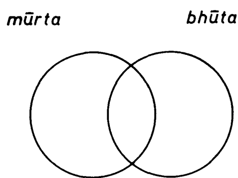
[40] *K V*, (B) 51, 10.

[41] Cf. J. F. Staal, 'The Theory of Definition in Indian Logic', *Journal of the American Oriental Society* 81 (1961), 126.

[42] *KV*, (B) 54, 9. Cf. *Setu*, p. 208, 1.18.

[43] A mixture of generic characters was not considered to be a mistake in late Navya-nyāya. Cf. *Dinakarīya* ('Chowkhamba Sanskrit Series'), p. 84.

J. F. Staal holds that the theory of *jātisaṃkara* shows a marked extensional character while he admits that Bocheński's view that Indian logic is intensional, remains valid for a large number of cases. (J. F. Staal, 'The Theory of Definition in Indian Logic', *Journal of the American Oriental Society* 81 (1961), p. 126; I. M. Bocheński, *Formale Logik* (Freiburg/München, 1956), p. 517.) In this paper Staal deals with the relation between the domain wherein *bhūtatva* (materiality or 'element-ness') may occur and the domain wherein *mūrtatva* (corporeality) may occur. Using a Venn diagram, one can illustrate the relation between these two domains or extensions as follows:



In this figure two overlapping circles are used to represent the extension of the two terms '*bhūta*' and '*mūrta*'. Here the extension of the term '*bhūta*' is equivalent to the domain wherein the property of being *bhūta* (*bhūtatva*) may occur. One can consider the extension of the term '*mūrta*' in the same way. The overlapping of these two circles indicates the relation of these two extensions. Thus, Staal holds that Indian logicians treat the relation between two extensions in an extensional way rather than in an intensional way.

Nobody can deny that the theory of *jātisaṃkara* possesses the extensional character insofar as the cross-division of extensional is dealt with in that theory. But for what purpose does Udayana propose that theory? Why does he have to differentiate two kinds of universals? It seems that the theory of *jātisaṃkara* is a device to keep the presupposed differences between generic characters.

[44] *KV*, (B) 68, 18.

[45] Cf. *KV*, (B) 68, 3.

CHAPTER VI

[1] H. Reichenbach, *Elements of Symbolic Logic* (The Free Press, New York, 1966), p. 192.

[2] The class of cows is the totality of the objects for which the expression 'x is a cow' is true. In a similar way, the class of white things is the totality of the objects for which the expression 'x is white' is true. The product of the class of cows and that of white things may be considered the class of white cows. As long as one is concerned with the product of the class of cows with that of white things, one does not have to take into consideration the fact that cow-ness is a generic character and the color white is a quality.

[3] J. M. Bocheński, *Formale Logik* (Freiburg/München, 1956), p. 517.

[4] N. L. Thomas, *Modern Logic An Introduction* (Barnes & Noble, Inc., New York, 1966), p. 8.

PART II

A TRANSLATION AND THE SANSKRIT TEXT OF THE *LAKṢAṆĀVALĪ*

We have the following printed texts of the *Lakṣaṇāvalī*.

V: Vindyeśvarīprasādaśarman (ed.), *Lakṣaṇāvalī* (Raj-Rajeswari Press, Benares, 1897).

P: Gosvamin, S. (ed.), *The Lakṣaṇāvalī of Udayanācārya*. (*The Pandit*, Vol. 25.) (The Medical Hall Press, Benares, 1900.) (This includes Śeṣasārṅgadhara's commentary, *Nyāyamuktāvalī* [*NMV*].)

M: Vidyavacaspati, and Śri Śaśinatha (ed.), *Lakṣaṇāvalī* (Darbhanga, Mithila, 1963). (This includes Bhaṭṭakeśava's commentary, *Lakṣaṇāvalīprakāśa* [*LVP*].)

G: Jitendra S. Jetly (ed.), *Kiraṇāvalī* included in the *Praśastapādabhāṣyam with the Commentary Kiraṇāvalī of Udayanācārya* (Gaekwad's Oriental Series, No. 154, Baroda, 1971).

The Bhandarkar Oriental Research Institute permitted me to use the following manuscript of the *Lakṣaṇāvalī* in the collection of its Manuscript Library:

Bh: A manuscript of the *Lakṣaṇāvalī* deposited at the Bhandarkar Oriental Research Institute. No. 786, 1887–91, New No., 30 (follia 6, lines 8, letters 44, character Devanāgarī, 10 cm 26.5 cm, paper).

The editor of the Pandit edition (P) has collated the original manuscript of the P edition with the following three manuscripts:

P-1: Manuscript 1 (*Mūlādarśaprathamapustaka*).
P-2: Manuscript 2 (*Mūlādarśadvitīyapustaka*).
P-3: Manuscript 3 (*Mūlādarśatṛtīyapustaka*).

My translation is based upon the P edition except in the following five cases: Texts 93, 136, 162, 169, and 182. In the following romanized text of the P edition I have underlined the passage that is to be replaced by a passage of another edition given in variants, which I have used. This is also underlined. Words enclosed by square brackets are words which I have supplied. I have numbered the sentences of the text for convenient reference.

Lakṣaṇāvalī[1]

1 Bh lakṣaṇāvalī ganeśāya namaḥ.

praṇamya pārvatīnāthaṃ[1] nityavijñānam īśvaram /
dravyādisarvameyānāṃ kariṣye lakṣaṇāvalīm //

1 P-3 pārvatīkāntaṃ

1. abhidheyaḥ padārthaḥ.

2. sa dvividhaḥ.[1] bhāvābhāvabhedāt.

1 M °dho, bhā°; Bh °dha. bhā°

3. tatra nañarthaviṣayatvarahitapratyayaviṣayo bhāvaḥ.

4. sa ca[1] ṣodhā dravyādibhedena.[2]

1 M sa ṣodhā; 2 M, Bh °dāt.

5. tatrānityadravyaguṇakarmasāmānyaviśeṣāḥ samavetāḥ.

6. nityadravyasamavāyābhāvāḥ samavetatvarahitāḥ.

7. dravyaguṇakarmāṇi samavetavanti.

8. sāmānyaviśeṣasamavāyābhāvāḥ samaveta[1]rahitāḥ.

1 Bh °tatvara°

9. tatra[1] guṇātyantābhāvānadhikaraṇaṃ dravyam.

1 M, Bh atra

10. mūrtta[1]tvarahitasamavetasamavetatvarahitamūrtta[2]tvarahitā[3]mūrtta[4]tvarahitasa-mavetajātimad vā.

1 V, M, G mūrta°; 2 V, M, G °mūrta°; 3 M °rahitasamaveta°; 4 V, M. G °amūrta°

11. gandhāsamavetagaganāravindasamavetajātimad dravyaṃ.[1]

1 V, M, G °mad vā.; Bh omits this text.

12. samavetasamavetasamavetaṃ vā.[1]

1 M °tatvaṃ vā.; G samavetasamavetajātimad vā.

13. tac ca navadhā bhidyate[1] pṛthivyādibhedena.[2]

1 M °dyate,; 2 M °dāt.

The Garland of Definitions (*Lakṣaṇāvalī*)

(*Remark*: An asterisked number has a note at the end of this section.)

Saluting Īśvara, the lord of Pārvatī,
who has eternal knowledge,
I will compose *The Garland of Definitions*
of all the objects of cognition, such as substance.

1. * A category (*padārtha*) is that which one can name.
2. * [First] categories are divided into those that exist (*bhāva*) and absence (*abhāva*).
3. * Of these, those that exist are the objects of cognitions whose object is not expressible by a negative particle.
4. Things that exist are of six kinds [namely, substance, quality, action, universal, distinction, and inherence].
5. * Of these, impermanent substance, quality, action, universal, and distinction inhere [in things] (*samaveta*).
6. Permanent substance, inherence, and absence lack the power of inhering [in things] (*samavetatvarahita*).
7. Substance, quality, and action have things inhering in them (*samavetavat*).
8. Universal, distinction, inherence, and absence have nothing inhering in them (*samavetarahita*).

SUBSTANCE

9. * Of these, substance is that which is not a substratum of the constant absence of quality.
10. * Or, [substance is that which] possesses the generic character which (1–a) inheres in that which lacks incorporeality and (1–b) [inheres] in that which lacks corporeality, and (2) does not inhere in that which inheres in that which lacks corporeality.
11. * Or, [substance] possesses the generic character which inheres in space and in a lotus, but not in smell.
12. * Or, [substance] is an entity that has a *samavetasamaveta* (that which has a *samaveta* inhering in itself) inhering in itself.
13. Substance is of nine sorts: earth, [water, fire, air, space, time, direction, soul, and mind].

14. tamo dravyaṃ na bhavati[1] ālokanirapekṣacakṣurgrāhyatvād[2] ālokābhāvavat[3].
1 M, G bhavati,; 2 G °tvāt, ā°; V °tvāt. ā°; 3 V °vat

15. tamaḥśa[1]bdavācyatvena vipratipattiviṣayatayā pakṣatvaṃ[2]
1 G tamaḥ śa°; Bh tamaśa°; 2 V °tvam,; M, G °tvam.

16. ālokābhāvaśabdavācyatayā[1] sam[2]prati(3→pattiviṣayā[4]tayā sādhyayogitvena←3)[5] sapakṣatvaṃ
1 M °yatvena; 2 M saṃ°; (3→←3) Bh °pannasādhyayogitvena; 4 M °vipaya°; 5 M °tvam.

17. iti na pakṣasapakṣayor aikyadoṣaḥ[1].
1 M aikyaṃ doṣaḥ.

18. tamaḥśabdo dravyavācako na bhavati[1] ālokaśabdānyatve sati ālokanirapekṣacakṣurgrāhyavācitvād[2] ālokābhāvaśabdavat.
1 M, G °ti,; 2 V °tvād. ālo°; G °tvāt, ālo°; Bh °tvāt. ālo°

19. tatra gandhātyantābhāvarahitā pṛthivī.

20. karakāsamavetavājiviṣāṇasamavetajātimati[1] vā.
1 Bh °ti

21. sā dvividhā[1] nityānityabhedāt.
1 Bh °dhā.

22. nityaḥ paramāṇur anityā kāryarūpā.
M nityaḥ paramāṇurūpo nityaḥ kāryarūpaḥ.; Bh nityā paramāṇuḥ.

23. pṛthivītvaṃ nityavṛtti[1] ghaṭapaṭa[2]vṛttijātitvāt sattāvad
1 M °vṛtti, gha°; G °vṛttigha°; 2 Bh °paṭajāti°

24. iti tatsiddhiḥ[1].
1 M °ddhir iti.

25. na ca pakṣāsiddhiḥ[1].
1 M °ddhiḥ,; G °ddhiḥ;

26. ghaṭo gaganavṛttitvarahitapaṭavṛttijātimān[1] ghaṭapaṭavyatireki[2]tvarahitatvāt paṭavad[3]
1 M °mān,; 2 Bh °vyatireki°; 3 M °tvād paṭatvavad

27. iti pṛthivītvasiddhiḥ[1].
1 M, Bh iti tatsiddhiḥ.

28. na ca sattā[1]siddhiḥ[2]
1 V, M, G sattā'si°; 2 M, G °ddhiḥ,; Bh °ddhiḥ.

14. * Darkness is not a substance,
because it is perceived by the eyes without the aid of light,
like the absence of light.

15. * [What is called 'darkness' is] the *pakṣa*, for there is disagreement as to the object denoted by the word 'darkness'.

16. * [What is called 'absence of light'] is properly a *sapakṣa* (an entity similar to the *pakṣa* insofar as it possesses the *sādhyadharma*), for there is universal agreement as to the object denoted by the words 'absence of light'.

17. * Therefore, we do not make the mistake that the *pakṣa* and the *sapakṣa* [in a syllogism] are the same.

18. * The word 'darkness' does not denote a substance,
because it denotes something perceived by the eyes without aid of light while being different from the word 'light',
like the words 'absence of light'.

19. * Of these [nine substances], earth is that which is not a substratum of the constant absence of smell.

20. * Or, [earth] possesses the generic character which inheres in a horse and in a horn, but not in hailstones.

21. Earth is of two sorts: permanent and impermanent.

22. Permanent [earth] is an atom; impermanent [earth] exists in the form of a product [i.e., an aggregate of atoms].

23. * Earth-ness occurs in permanent [earth],
because it is a generic character occurring in a pot and in cloth,
like existence.

24. We have thus proved [its occurrence in permanent substance].

25. * One should not say that the *pakṣa* [i.e., earth-ness] is not established.

26. * For a pot has the generic character which occurs in cloth and which lacks the property of occurring in space,
because it [i.e., the pot] lacks the property of being [a] different [sort of thing] from a pot and cloth,
just as cloth [lacks this property].

27. * We thus prove the existence of earth-ness.

28. * One should not say that existence [mentioned in Text 23] is not established.

29. gaganaṃ dravyatvetara[1]jātimad[2] bhūtatvād[3] ghaṭavad
1 G dravyetara°; 2 M °mat,; V, Bh °mat; 3 M, Bh °tvāt

30. ity anumānāt sattāsiddhiḥ.
M, Bh iti tadanumānāt.
31. na ca dravyatvāsiddhiḥ[1].
1 G °ddhiḥ;
32. gaganādi[1] rupāvṛttijātimad[2] guṇavattvād[3] ghaṭavad
1 M °ādiḥ; 2 M °mān; V, Bh °mat; 3 M, Bh °tvāt

33. iti dravyatvasiddhiḥ.
34. kāryaṃ trividhaṃ śarīrādibhedena.
35. bho[1]gāyatanam antyāvayavi śarīram.
1 V, M, G, Bh tatra bho°
36. śarīrasaṃyuktam aparokṣapratītisādhanam atīndriyam indriyam.

37. jñānakaraṇajanyatvarahitajñānatvam[1] aparokṣatvam.
1 Bh °rahitatvam
38. atīndriya(1→tvam ajñātasā←1)dhanatvam.
(1 → ←1) P-4, V, G, Bh °tvaṃ nāmājñāta°; M °tvaṃ cājñāta°
39. pratīyamānatayā bhogasādhanaṃ viṣayaḥ.
40. iti pṛthivīprakaraṇam.
M, Bh iti pṛthivī.
41. pṛthivīvṛttitvarahitahimakarakāvṛttijātimaj jalam.

42. tan nityānityabhedād[1] dvividham.
1 M, Bh °bhedena
43. jalatvaṃ nityavṛtti himakarakāvṛttijātitvāt[1] sattāvad[2]
1 M °tvāt,; 2 Bh sāttāvad

44. iti tatsiddhiḥ.
45. karakā gaganavṛttitvarahitahimavṛttijātimatī[1] snehādhikaraṇatvād[2] dhimavad[3]
1 M °matī,; 2 M °tvāt,; 3 V, M, Bh °tvāt himavad; G °tvāt himavat

46. iti karakāyāṃ tatsiddhih.
47. anityaṃ trividhaṃ śarīrādibhedenā[1].
1 G °bhedāt.

29. * Space has a generic character that is different from substance-ness,
because it is an element (*bhūta*),
like a pot.
30. We thus prove the existence of existence.

31. * One should not say that substance-ness [mentioned in Text 29] is not established.
32. * Space and the like possess a generic character which does not occur in color,
because they possess qualities,
like a pot.
33. We thus prove the existence of substance-ness.
34. [Earth] products are of three kinds: body, [sense-organ, and object].
35. * The body is the basis of enjoyment and is a final [or complete] whole.

36. * The sense-organ, connected with [its] body, establishes perceptual cognition, and cannot itself be perceived by the sense-organs.
37. Being a perceptual [cognition] means being a cognition that is not produced by [another] cognition which is its instrumental cause.
38. Being imperceptible to the sense-organs means being a means which is not [itself] perceived.
39. The object is a means of enjoyment insofar as it is experienced.
40. Here ends the section on earth.

41. Water possesses the generic character which occurs in snow and in hail, but not in earth [or lacks the property of occurring in earth].
42. Water is of two sorts: permanent and impermanent.

43. * Water-ness occurs in permanent [water],
because it is a generic character which occurs in snow and in hail,
like existence.
44. We thus prove [its occurrence in permanent substances].
45. Hail possesses the generic character which occurs in snow, but not in space [or lacks the property of occurring in space],
because it is a locus of fluidity,
like snow.
46. We thus prove the existence of it [i.e., water-ness] in hail.
47. Impermanent [water] takes three forms: body, [sense-organ, and object].

48. śarīraṃ varuṇaloke[1].

1 Bh °loke

49. jalaparamāṇa(1→vaḥ pāramparyeṇa ←1)śarīrārambhakāḥ[2] indriyārambhakatvāt[3] pārthivaparamāṇuvat.

(1 → ←1) M °yaḥ śa°; 2 M °kā in°; 3 V, M °tvāt,

50. indriyārambhaka(1→tvaṃ tu ra←1)sanasyāpyatvāt siddham[2].

(1→ ←1) M° tvaṃ ra°; 2 Bh rasanasyāvyāpyatvāsiddham

51. rasanam āpyaṃ rūpādi(1→ṣu[3] pañcasu ←1)madhye rasasyaivābhivyañjakatvāt[2] sakturasābhivyañjakasalilavad iti.

(1→ ←1) M °ṣu ma°; 2 V °tvāt.; M, G °tvāt,; 3 M °kajalavat.

52. rasanasiddhis (1→←1)tu rasopalabdhiḥ kāraṇasādhyā[2] aparokṣapratītitvād[3] (4→rūpolabdhivad←4) iti.

(1→ ←1) M tu, ra°; 2 G °bdhika°; 3 V, M, G, Bh °tvāt; (4→ ←4) Bh rūpavad

53. viṣayas tu saritsamudrādir himakarakādiḥ[1].

1 M, Bh °samudrahi°

54. na ca karakāyāḥ kāṭhinyāt[1] pārthivatvam āśaṅkanīyam[2].

1 G °kāṭhi°; 2 M, G °yam,; Bh °yaṃ.

55. anantaram[1] eva svabhāvāpagamād iti[2].

1 Bh anaṃta°; 2 M °gamād; Bh °gamāt

56. ity apprakaraṇam.

V āpaḥpra°; M, Bh ity āpaḥ., G āpaḥ pra°

57. rasātyantābhāvasamānādhikaraṇarūpādhikaraṇaṃ[1] tejaḥ.

1 Bh °tyaṃtā°

58. kara(1→kāvṛttitvarahitavi←1)dyudākarajavṛttijātimad vā.

(1→ ←1) M °kā'vṛttivi°; Bh °kāvi°

59. vidyuttejaḥ[1] karakāvṛttitvarahitākarajavṛttijāti(2→mati vā←2) vidyudvyatiriktākarajānyatvarahitatvād[3] ākarajavat.

1 M vidyut; (2→ ←2) M °matī; Bh °matī vā.; 3 V, G, °tvāt; M °tvāt,; Bh °tvāt.

60. ākarajaṃ suvarṇādi[1].

1 M °diḥ.

48. * [Water in the form of] a body is found in the world of Varuṇa [the Vedic deity of water].

49. * Water atoms can produce a body indirectly,
because they can produce a sense-organ,
like earth atoms.

50. We can ascertain [that water atoms have] the power of producing a sense-organ,
because the gustatory organ is made of water.

51. The gustatory organ is made of water,
because, of the following five qualities: color, [taste, smell, touch, and number], it manifests only taste,
just as water manifests the taste of the flour of barley which is first fried and then ground (*saktu*).

52. We can prove the existence of the gustatory organ as follows: The perception of taste is made by a sense-organ [i.e., the gustatory organ],
because it is a direct perception,
like the perception of color.

53. On the other hand, [water in the form of] an object can be a river, an ocean, etc., or snow, hail, etc.

54. * One should not suspect hail to be made of earth on account of its hardness.

55. For the property [of its being hard] ceases to exist within a few moments.

56. Here ends the section on water.

57. * Fire is the locus of color which has the same locus as the constant absence of taste.

58. * Or, fire has the generic character whih occurs in lightning and in gold and gems (*ākaraja*), but not in hail.

59. * Or, the fire of lightning has the generic character that occurs in gold and gems but not in hail,
because [this fire] lacks the property of being (1) something other than gold and gems, and (2) different from lightning,
just as gold and gems [lack the property of being (1) something other than lightning, and (2) different from gold and gems, and likewise gold and gems have the generic character that occurs in lightning but not in hail].

60. *Ākaraja*, lit., what is born from a mine, means gold, etc.

61. nanu suvarṇādikaṁ[1] pārthivaṃ naimittika(2→dravatvādhikaraṇā←2)tvād[3] ghṛtavad.[4]
1 Bh °ādi; (2→ ←2) M °drava°; 3 V °tvāt; M °tvāt,; 4 V, G °vat.; M °vad

62. anena[1] pārthivatvasiddhāv[2] ākarajavṛttijātimattvasādhane 'pi vidyuttejaso[3] na taijasa[4]tvasiddhir iti cet.[5]
1 M, Bh ity anena; 2 M, Bh °siddher; 3 V °nepi vidyuto; 4 M tejasa°; 5 V, G, Bh cen; M cet –

63. na.[1] suvarṇādikam apārthivaṁ[2] atyantāgnisaṃyo(3→ge 'py a←3)nucchidyamānadravatvādhikaraṇatvād[4]
1 M na,; 2 M, G °vam,; (3→ ←3) M, Bh °ge 'nu°; 4 G °tvād,

64. iti (1→pratyanumānenā←1)pārthivatva[2]siddhau[3] asāṃsiddhikadravatvena tatsiddhiḥ.
(1→ ←1) M anumānenā°; 2 G °ttva°; 3 Bh °ddhāv

65. anyathā[1] (2→pārthivatve dravatvaṁ←2)[3] atyantāgnisaṃyoge ucchidyeteti[4] tarko' nusaraṇīyaḥ.
1 G anyayā; (2→ ←2) M pārthivadra°; 3 Bh dravyatvam; 4 M ucchinattīti

66. tac ca dvividhaṁ[1] nityam anityaṃ ceti.
1 V, G °dham.; M °dham

67. tejas[1]tvaṃ nityavṛtti[2] vidyudākarajavṛttijāti(3→tvāt←3) sattāvad
1 Bh taja°; 2 M °vṛtti,; (3→ ←3) M °tvād

68. iti nityatvasiddhiḥ.

69. sādhitaṃ tejas[1]tvam.
1 M °taṃ ca teja°; Bh °taṃ ca ja°

70. anityaṃ trividhaṁ[1] śarīrādibhe[2]dena.
1 V °dhaṃ.; G °dhaṃ.; 2 Bh °rābhe°

71. śarīraṁ[1] ādityaloke[2] (3→tasyāpi pūrvavat siddhiḥ←3).
1 G śarīrarām; 2 M, G °ke.; (3→ ←3) M tasyāpārthivatvasiddhiḥ pūrvavat.

72. indriyaṃ rūpopalambha(1→kaṃ cakṣuḥ←1).
(1→ ←1) Bh °kaṃ.

73. rūpopalabdhiḥ karaṇasādhyā kriyātvāc[1] chidikriyāvad[2]
1 V, Bh °tvāt; 2 Bh chidākriyādivad

74. iti tatsiddhiḥ.

61. Someone may raise the following objection:
"gold and the like are made of earth,
because they are loci of conditional fluidity,
like butter.

62. "Since we have hereby proved earth-ness [to reside in gold and gems], even if you should prove that the fire of lightning possesses a generic character that resides in gold and gems, you will not have proved this generic character to be fire-ness."

63. * [We answer:] That is incorrect, for gold and the like are not made of earth, because they are the loci of fluidity which would not disappear upon prolonged contact with fire.

64. * From this inference leading to the opposite conclusion, it follows that [gold and the like] are not made of earth, and that their being fire is established since their fluidity is not natural.

65. Otherwise, if they were made of earth, [their] fluidity would disappear upon prolonged contact with fire. Such is the line of argument to be followed.

66. Fire is of two sorts: permanent and impermanent.

67. * Fire-ness occurs in permanent [fire],
because it is a generic character which occurs in lightning and in gold and gems,
like existence.

68. We thus prove the existence of the permanence [of fire-ness].

69. The existence of fire-ness has already been proved [i.e., by Text 57].

70. Impermanent [fire] takes three forms: body, [sense-organ, and object].

71. * [Fire in the form of] a body is [found] in the world of Āditya [the Vedic deity of the sun]. We can prove this also as before [cf. Text 48].

72. * [Fire in the form of] a sense-organ is the visual organ which perceives color.

73. The perception of color is made through an instrumental cause [i.e., a sense-organ],
because it is an action,
like the action of an axe.

74. We thus prove it [i.e., the fact that the sense-organ made of fire perceives color].

75. kartṛpreryaṃ karaṇaṁ[1].

1 M °ṇam

76. dhātuvācyā kriyā.

M dhātuvācyavyāpāreṇa.

77. cakṣuś[1] taijasaṃ[2] rūpā(3→diṣu pañcasu madhye←3) rūpasyaivā[4]bhivyañjakatvād[5] ālokavat.

1 G, Bh cakṣuḥ; 2 V, °sam; (3→ ←3) M °ṣu madhye; 4 Bh rūpasyaiva a°; 5 V, Bh °tvāt; M °tvāt,

78. viṣayas tu bhaumādiḥ[1].

1 M °ādir

79. iti tejaḥprakaraṇam.

M, Bh iti tejaḥ.

80. rūpātyantā[1]bhāvādhi[2]karaṇasparśādhikaraṇo[3] vāyuḥ.

1 Bh °tyaṃtā°; 2 P-1, M °bhāvasamānādhi°; 3 M °sparśavān

81. vip(1→ratipannaḥ sparśo←1) rūparahita[1]dravyavṛttiḥ[2] sparśatvarahitaśā[3]bdānyatvarahita(4→tvāc←4) chabdavad[5]

(1→ ←1) V °naḥ sparśaḥ; M °nasparśaḥ; Bh °nasparśo; 2 M °ttiḥ,; 3 M °tataccha°; (4→ ←4) V, M, G, Bh °tvāt śa°; 5 M °vat.

82. iti vāyusi[1]ddhiḥ.

1 Bh tatsi°; M omits this text.

83. sa ca dvividho[1] nityānityabhedena.

1 V, G °dhaḥ. M sa nityānityamedena dvividhaḥ.; M has this text between Texts 85 and 86. Bh omits this text.

84. vāy(1→utvaṃ nityavṛtti[2] ni←1)tyavṛttitvarahitavāyutvānyatvā[3]rahitatvāt pṛthivī[4]tvavad[5]

(1→ ←1) G °tvaṃ ni°; 2 M °tti,; 3 G °ānyavṛttitva°; 4 G pṛthibī°; 5 M °vat,; Bh omits this text.

85. iti tatsiddhiḥ.

M iti nityavāyusiddhiḥ.; Bh omits this text.

86. (1→kāryaṃ trividhaṃ←1) śarīrādibhedena.

(1→ ←1) M anityas trividhaḥ; Bh kāryaṃ caturvidhaṃ

87. vāyutvaṃ śarīravṛtti[1] bāhyendri[2]yavṛttijātitvāt sattāvad

1 M °vṛtti,; 2 M utpādyendri°; Bh uptīdyaṃdri°

75. The instrumental cause is that which the agent urges himself to use [in order to accomplish his original plan].

76. An action is indicated by a verbal root [cf. Text 73].

77. The visual organ is made of fire
because, of the following five qualities: color, [taste, smell, touch, and number], it manifests only color,
like light.

78. * [Fire in the form of] an object can be earthly, [heavenly, or visceral].

79. Here ends the section on fire.

80. * Air is a locus of touch and a locus of the constant absence of color.

81. * [The quality] touch, about which there is disagreement, occurs in a substance that lacks color,
because it lacks the property of being (1) something other than sound, and (2) that which lacks touch-ness,
just as sound [lacks the property of being (1) something other than touch, and (2) that which lacks sound-ness, and likewise sound occurs in a substance which lacks color].

82. We thus prove the existence of air.

83. Air is of two sorts: permanent and impermanent.

84. * Air-ness occurs in permanent [air],
because it lacks the property of being (1) something other than air-ness, and (2) that which does not occur in permanent [air],
just as earth-ness [lacks the property of being (1) something other than air-ness, and (2) that which does not occur in permanent things, and likewise earth-ness occurs in permanent earth].

85. We thus prove its occurrence in permanent substance.

86. [Air] products are of three kinds: body, [sense-organ, and object].

87. * Air-ness occurs in a body,
because air-ness is a generic character which occurs in an external sense-organ,
like existence.

88. iti tatsiddhiḥ.

89. sparśopalambhakaṁ[1] indriyaṃ (2→ vāyavīyaṃ rūpādiṣu pañcasu ←2) madhye sparśas-yaivā[3]bhivyañjakatvād[4] (5→ vyajanapavanavad ←5) iti.

1 Bh °bham; (2→ ←2) M °yaṃ rūpādiṣu ma°; 3 Bh °syaiva a°; 4 V, °tvāt,; M, Bh °tvāt; (5→ ←5) M vyajanavad iti; G vyajanapavanavat.

90. viṣayas (1→ tu ←1) upalabhyamānasparśādhiṣṭhānabhūtaḥ[2] prāṇas tu śarīrādiprе[3]raṇa-hetur vāyuḥ[4].

(1→ ←1) M tū°; 2 M °nabhūtaḥ.; Bh °nubhūtaṃ; 3 P-1, M °rāntaḥpre°; Bh °rādipra°; 4 M °yur

91. iti vāyuprakaraṇam.

M, Bh iti vāyuḥ.

92. śabdātyanta[1]bhāvānadhikaraṇaṃ nabhaḥ.

1 Bh śabdātyaṃtyaṃtā°

93. (*saṃyogajā*[1]nyajanyaviśeṣaguṇasa[2]mānādhikaraṇa[3]viśeṣādhikaraṇaṃ vā.)

1 Bh *saṃyogāja*°; 2 M °ṣaguṇasa°; 3 Bh °ādhiraṇa°; P-1 and M omit this text. The brackets, '( ),' are not used in V and G.

94. śabdaḥ[1] kva cid āśritaḥ[2] guṇatvād[3] rūpavat[4].

1 Bh śabda; 2 M °taḥ,; 3 M, Bh °tvāt rū°; 4 M, Bh °vad iti.

95. na (1→ ca śabdasya ←1) sparśavadāśrayaḥ sparśāsahakāritvād[2] buddhivad (3→ iti ←3).

(1→ ←1) P-1, M ca spa°; Bh ca śabdaḥ spa°; 2 V, M °tvāt; (3→ ←3) M °vat.

96. na ca kālādyāśrayaḥ[1] bāhyendriyagrāhyatvād[2] rūpavad

1 M °yo,; G °yaḥ,; Bh °yo; 2 V °tvāt

97. iti[1] pariśeṣāt tatsiddhiḥ[2].

1 M, Bh iti.; 2 M °siddhir

98. ity ākāśaprakaraṇam.

M ity ākāśaḥ.; Bh i ākāśaḥ.

99. aniyataparatvāsamavā(1→ yisamavāyitvarahita ←1)paratvāsamavāyisamavāyimū[2]rtatvara-hitaḥ kālaḥ.

(1→ ←1) G °yi samavāyipa°; Bh °yi'samavāyitvarahitapa°; 2 M °yī mū°; Bh °yo mū°

100. gaganaṁ[1] aniyataparatvāsama(2→ vāyisamavāyitva ←2)rahitamūrtatvarahitajñā[3]nasama-vāyitvarahitadra[4]vyānya[5]d amūrtatvād ātmavad[6]

1 G °nam.; Bh °naṃ; (2→ ←2) M, G °vāyitva°; 3 Bh °mūrtatvajñā°; 4 V, G °rahitatvadra°; 5 V, Bh °ānyat; 6 G °vad,; Bh °vat

101. iti tatsiddhiḥ[1].

1 M °ddhir

88. We thus prove it [i.e., the fact that air-ness occurs in a body].

89. The sense-organ made of air perceives touch,
because, of the five [qualities]: color, [taste, smell, touch, and sound], it manifests only touch,
like the wind of a fan.

90. [Air in the form of] an object is the basis of the touch being perceived, and breath is the air that acts as the cause for the inner impulses of the body, etc.

91. Here ends the section on air.

92. Space is that which is not a substratum of the constant absence of sound.

93. * (Or, [space is] the locus of that distinction which has the same locus as the special quality [i.e., sound] which is produced [by disjunction and sound], and is not produced by conjunction.)

94. Sound resides in something,
because it is a quality,
like color.

95. * The substratum of sound does not possess touch,
because it does not help in causing touch,
any more than does the intellect.

96. * [Sound] does not reside in time, [direction, soul, and mind],
because it can be perceived by an external sense-organ,
like color.

97. * By the method of elimination we thus prove that [sound resides only in space].

98. Here ends the section on space.

99. * Time is (1) without corporeality, (2) the inherent cause of the non-inherent cause of [temporal] farness, and (3) not the inherent cause of the non-inherent cause of inexact [i.e., directional] farness.

100 * Space is another substance which is (1) not the inherent cause of cognition, (2) without corporeality, and (3) not the inherent cause of the non-inherent cause of inexact [i.e., directional] farness,
because it is incorporeal,
like the soul.

101. We thus prove the existence of time.

102. iti kālaprakaraṇam.
M, Bh iti kālaḥ.

103. aniyataparatvāsamavāyisamāvayinī mūrtatvarahitā dik.

104. kālo viśeṣaguṇā[1]rahitā[2]mūrtadravyānyaḥ[3] mūrtatvarahitatvād[4] ākāśādivad[5]
1 Bh viśeguṇa°; 2 V, G °to mū°; 3 G °yaḥ,; 4 V °rahitatvāt; Bh °ratatvāt; 5 M ākāśavad

105. iti tatsiddhiḥ.

106. iti dikprakaraṇam.
G iti dik prakaraṇam.; Bh iti dik.; M omits this text.

107. jñānātyantā[1]bhāvarahita ātmā.
1 Bh °yaṃtā°

108. paratvāsamavāyisamavāyitvarahitaśabdāsamānādhi[1]karaṇakāryāśrayo vā.
1 M °śabdānādhi°

109. jñānaṃ kva cid āśritaṃ[1] guṇatvād rūpavad
1 M °tam,

110. iti tatsiddhiḥ.

111. na ca śarīrendri[1]yāṇāṃ tadāśrayatvaṃ[2] kāryatvād ghaṭavad[3]
1 Bh °raṃdri°; 2 M, Bh tadāśritatvaṃ; 3 V, G °vad iti., M °vat.

112. kāryasya tadāśrayatve svargādyarthitayā[1] jyotiṣṭomādyupadeśo na syāt.
1 M svargarthitayā; Bh svagādyarthitayā

113. na ca manasas tadāśrayatvaṃ karaṇa(1→tvāc cakṣurvat←1).
(1→ ←1) Bh °tvā cakṣuvat.

114. sa dvividhā[1] īśānīśabhedāt[2].
1 V °dhaḥ; G °dhaḥ,; 2 P-1, P-2, V, G īśvarānīśvarabhedāt; M sa dvividhaḥ īśvar-ānīśvarabhedāt. tatreśvaraḥ sarvajña ekaḥ.; Bh sa dvivi īśvarānīśvarabhedāt.

115. (1→aṅkurādikaṃ sakartṛkaṃ kārya←1)tvād ghaṭavad
(1→ ←1) Bh aṃkurādikaṃ kārya°

116. itīśvarasiddhiḥ.
M, Bh iti tatsiddhiḥ.; V, G iti īśvarasiddhiḥ.

117. dvitīyas tv[1] ahaṃpratyayavedyaḥ[2]. sa ca nānā vyavasthāvacanād[3] iti[4].
1 G, Bh tu; 2 V °vedyaḥ; 3 M °sthānadaśanād; 4 G iti

102. Here ends the section on time.

103. * Direction is (1) the inherent cause of the non-inherent cause of inexact [i.e., directional] farness, and (2) without corporeality.

104. Time is another substance which (1) lacks corporeality and (2) lacks special qualities,
because it lacks corporeality,
like space.

105. We thus prove the existence of direction.

106. Here ends the section on direction.

107. Soul is that which lacks the constant absence of knowledge.

108. * Or [soul] (1) is an abode of products which do not have a locus in common with sound, and (2) is not an inherent cause of the non-inherent cause of farness.

109. * Knowledge resides in something
because it is a quality,
like color.

110. We thus prove the existence of soul.

111. Bodies and sense-organs are not substrata of knowledge,
because they are products,
like a pot.

112. * If a product were a substratum of knowledge, one would not have any teachings concerning the *jyotiṣṭoma* sacrifice, etc., as something which aspires to heaven.

113. Mind is not a substratum of knowledge,
because it is a means [of knowledge],
like the visual organ.

114. Soul is of two sorts: God and non-God.

115. A sprout and the like are produced by an agent,
because they are products,
like a pot.

116. We thus prove the existence of God.

117. The second one [i.e., non-God] can be known through the notion 'I', and it is of many sorts since [many] stages [of it] can be talked of.

118. ity ātmaprakaraṇam.

M, Bh ity ātmā.

119. sparśarahitatve sati mūrttaṃ[1] manaḥ.

1 V, M, G mūrtaṃ

120. viśeṣaguṇātyan[1]tābhāvādhikaraṇaṃ (2→ mūrttaṃ manaḥ ←2).

1 Bh °tyaṃtā°; (2→ ←2) V, M, G °ṇatve sati mūrtaṃ vā.; Bh °ṇatve sati mūrtatvaṃ vā.

121. pṛthivī(1→vṛttipṛthivī←1)tvarahita(2→vṛttivṛtti←2)tvarahitaguṇatvavyāpyajātimān viśeṣa-guṇaḥ.

(1→ ←1) G °vṛtti pṛthivī°; (2→ ←2) G °vṛtti vṛtti°

122. ātmapratītiḥ karaṇasādhyā[1] aparokṣapratītitvād[2] rūpopalabdhivad

1 M, G °yā,; 2 V, M, Bh °tvāt

123. iti tatsiddhiḥ[1].

1 M °ddhir

124. iti manaḥprakaraṇam.

M, Bh iti manaḥ.

125. iti dravyapadārthaḥ[1].

1 M °thaḥ samāptaḥ.; Bh °thavyākhyā samāptā.

126. saṃyogājanyasaṃyogāsamavāyisamavetatvarahitasaṃyogāsaṃyogasamavetavān guṇah.

127. vibhāgājanyavibhāgāsamavāyisamavetatvarahitavibhāgāvibhāgasamavetavāṃś ca[1].

1 V, G °vān guṇaḥ.; M °veto vā guṇaḥ.

128. rūpaṃ saṃyogājanya[1]saṃyogāsamavāyisamavetatvarahitasaṃ(2→yogasamaveta←2)vad[3] rūpatvarahitasaṃyogānya[4]tvarahitatvāt saṃyogavad

1 Bh °gājyanya°; (2→ ←2) P-2, V, G °yogasamavetatvarahitasaṃyogasama°; 3 V, M, G °vat,; 4 M °saṃyogājanya°

129. iti guṇatvasiddhiḥ.

118. Here ends the section on soul.

119. Mind is corporeal but lacks touch.

120. Mind is corporeal and is a substratum of the constant absence of special qualities.

121. * The special qualities possess the generic character which (1) is pervaded by quality-ness, and (2) lacks occurrence in that which occurs [both] in (a) earth and (b) that which lacks earth-ness [i.e., non-earth].

122. The notion 'self' (*ātman*) is made by a sense-organ,
because it is a perceptual notion,
like the notion 'color'.

123. We thus prove the existence of it [i.e., mind].

124. Here ends the section on mind.

125. Here ends the chapter on substance.

QUALITY

126. * Quality possesses that [generic character] which (1) inheres [both] in conjunction and non-conjunction, and (2) does not inhere in the non-inherent cause of that sort of conjunction which does not result from conjunction.

127. * Or, [quality] possesses that [generic character] which (1) inheres [both] in disjunction and non-disjunction, and (2) does not inhere in the non-inherent cause of that sort of disjunction which does not result from disjunction.

128. Color possesses that [generic character] which (1) inheres in conjunction, and (2) does not inhere in the non-inherent cause of that sort of conjunction which does not result from conjunction,
because color lacks the property of being (1) something other than conjunction, and (2) that which lacks color-ness,
just as conjunction [lacks the property of being (1) something other than color, and (2) that which lacks conjunction-ness, and likewise conjunction possesses the generic character which (1) inheres in color, and (2) does not inhere in the non-inherent cause of that sort of conjunction which does not result from conjunction].

129. We thus prove the existence of quality-ness.

130. [1]caturviṃ[2]śatiprakāro rūpādibhedena.
1 M sa ca° ; 2 G catuviṃśa°

131. rasāsamavetanīlapītasamavetavad[1] rūpam.
1 Bh °vat

132. guṇatve sati cakṣurmātragrāhyaṃ[1].
1 V, G °yaṃ vā.; Bh °yaṃ vā rūpam.; M cakṣurgrāhyaṃ rūpam.

133. tat saptaprakāram.
M and Bh omit this text.

134. na ca rūpagrāhakaṃ cakṣuś[1] cakṣurmātragrāhyaṃ[2] rūpaṃ[3] ity anyonyāśraya[4]tvaṃ[5]
1 M °ṣuḥ,; 2 M cakṣurgrāhyaṃ; 3 Bh rūpaṃm; 4 M °āśrayaḥ; 5 V °tvam; G °tvam;; Bh °tvaṃ.

135. nayanagolakādhiṣṭhānatvena cakṣurnirūpaṇāt.

136. śuklo[1] rasāsamavetanīlasamavetavān[2] *nīlatvarahitaśuklānyatva*[3]rahitā(4→tvān nīlava←4)t.
1 Bh śukla; 2 M rasāsamavetavān; 3 V, G *śuklatvarahitanīlānyatva°*: (4→ ←4) V, M, Bh °tvāt nīlādivad; G °tvān nīlavad

137. iti rū[1]patvasiddhiḥ.
1 M nīlarūpa°

138. nīlaḥ[1] svamātrasamavetavān[2] svamā[3]trasama(4→vetavattvarahitaghaṭānyatva←4)rahitat-vād[5] ghaṭavat[6].
1 V, G, Bh nīlaṃ; 2 V, G °tavat; Bh °tava; 3 M rasamā°; (4→ ←4) V, G, °vetatvarahitanīlānya° ; M °vetarahitanīlānya° ; Bh °vetarānyanīlānya° ; 5 V, M, Bh °tvāt; 6 V, M °vad; Bh °vat

139. iti nīlatvajātisiddhiḥ.

140. nīlatvarahitaghaṭatvātyantā[1]bhāvarahitaḥ[2] svaśabdā[3]rthaḥ.
1 Bh °ṭātyaṃtā°; 2 M °bhāvatvarahitaḥ; 3 M svapadā°

141. (1→guṇatve sati rasanagrāhyo←1) rasaḥ.
(1→ ←1) M rasanagrāhyo guṇo

130. Quality is of twenty-four sorts: (1) color, [(2) taste, (3) smell, (4) touch, (5) number, (6) measure, (7) separateness, (8) conjunction, (9) disjunction, (10) farness, (11) nearness, (12) heaviness, (13) fluidity, (14) viscidity, (15) sound, (16) knowledge, (17) happiness, (18) pain, (19) desire, (20) hatred, (21) effort, (22) virtue, (23) vice, and (24) inertia].

131. * Color possesses that [generic character] which inheres in the color blue and in the color yellow, but not in taste.

132. [Or, color is] the quality which can be perceived only by the visual organ.

133. It is of seven sorts: [white, blue, yellow, red, green, brown, and variegated].

134. There is no [fault of] mutual dependence of the following kind: The visual organ is that which perceives color, and color is that which is perceived only by the visual organ;

135. * because the visual organ is [also] described as having its seat in the eyeballs.

136. * The color white possesses that [generic character] which inheres in the color blue but not in taste,
because it lacks the property of being (1) something other than the color blue, and (2) that which lacks the 'color-white-ness',
just like the color blue [lacks the property of being (1) something other than the color white, and (2) that which lacks the 'color-blue-ness', and likewise the color blue possesses the generic character which inheres in the color white but not in taste].

137. We thus prove the existence of color-ness.

138. * The color blue possesses that which inheres in itself alone,
because it lacks the property of being (1) something other than a pot, and (2) that which lacks the property of being possessing that which inheres in itself alone,
just like a pot [lacks the property of being (1) something other than the color blue, and (2) that which lacks the property of possessing that which inheres in itself alone].

139. We thus prove the existence of the generic character of the color blue.

140. Here the meaning of 'itself' (in Text 138) is that which lacks the constant absence of the property of being a pot, [i.e., something] which lacks the property of being the color blue.

141. Taste is the quality that is perceived by the gustatory organ.

142. (1→ sa ca ṣodhā ←1) mādhuryādibhedena.

(1→ ←1) M, Bh sa ṣo°

143. kṣīrekṣuguḍasalileṣu[1] mādhuryādisāmye[2] 'py avāntarajātibhedasya[3] [4] vidyamānatvād[5]

1 M °ḍatailesu; Bh ° ḍaleṣu; 2 M ° dhuryasya sāmye; Bh ° dhuryasamye; 3 V, M ° ye 'pi avā°; G ° yepi 'vā°; 4 Bh avāṃtajāti°; 5 V, M ° tvāt; Bh ° tvāt.

144. viśeṣaguṇatvasiddhiḥ[1].

1 Bh ° tvāsi°

145. guṇatve sati ghrāṇagrāhyo gandhaḥ[1].

1 Bh gaṃdhaḥ.

146. jalādāv[1] aupādhikī gandhapratītir[2] na svabhāvatā[3]

1 Bh jaladāv; 2 M ° tiḥ,; 3 Bh svabhā

147. iti viśeṣā[1]guṇatvasiddhiḥ.

1 Bh viśaṣa°

148. jalaṃ na gandhādhikara(1→ṇam apākajarūpādhi←1)karaṇatvāt tejovat.

(1→ ←1) V, Bh ° ṇaṃ pākajarūpādhi° ; G ° ṇaṃ pākarūpānadhi°

149. vāyoh (1→pakṣatulyatvān (2→ na ←1) tatra ←2) vyabhicāraḥ.

(1→ ←1) Bh ° ṣalyatvam ato na; (2→ ←2) V, M, G na vya°

150. guṇatve sati tvagindriyamātragrāhyaḥ[1] sparśaḥ.

1 V, G ° driyagrāhyaḥ

151. sa trividhaḥ[1]. śītoṣṇānuṣṇāśītabhedāt.

1 M ° dhaḥ,; Bh ° dhā

152. nanv (1→ anuṣṇāśītasparśasya ←1) katham viśeṣaguṇatvaṃ[2] [3] tasya pṛthivīvāyusādhāraṇatvāt[4].

(1→ ←1) M ° śītasya na; Bh ° śītasparśasya na; 2 Bh viśegu° ; 3 M, G ° tvam,; 4 V ° tvāt; G ° tvāt;

153. pākajatvāpākajatvābhyām avāntarajātibhedena[1] viśeṣaguṇatve[2] naimittikadravatvasyāpy[3] atyantāgnisaṃyoge (4→ saty ucchedānucchedābhyām avāntarajātisadbhāvena ←4) viśeṣaguṇatā syāt[5]

1 Bh pākajāpākajābhyāṃ avāṃta° ; 2 Bh ° tve.; 3 Bh ° yaṃtā° ; (4→ ←4) Bh svattpucchedānuchedābhyāṃ avāṃtarajātibhedena sadbhāvena; 5 V, M, G, Bh syāt.

154. tataś ca naimittikadravatvasya sāmānyaguṇapāṭho nirarthakaḥ[1] syād[2]

1 Bh nirartha; 2 V, M, G syāt.

155. anuṣṇāśītasparśasya vā pāṭhaḥ syāt[1]

1 V, G syāt.; M and Bh omit this text.

142. It is of six sorts: sweet, [sour, salty, sharp, pungent, and bitter].

143. Although sweetness and other tastes are common to milk, sugar-cane, dry sugar, and water, differences do exist in such intermediate generic characters.

144. Hence we prove [taste] to be a special quality.

145. Smell is the quality that is perceived by the olfactory organ.

146. The cognition of smell in water and other [substances] is not caused by the original nature [of water, etc.,] but conditioned [by the presence of earth].

147. We thus prove [smell] to be a special quality.

148. * Water is not a substratum of smell,
because it is not a substratum of the color which results from 'cooking',
like fire.

149. [Someone might say that air is a substratum of smell, but] one can deal with air in the same way as we have dealt with the *pakṣa* here [i.e., water]. Therefore, our inference does not involve any deviation.

150. Touch [or tactile sensation] is the quality that is perceived only by the tactile organs.

151. It is of three sorts: cold, hot, and 'not-hot not-cold'.

152. The following objection is raised (Text 152–157): "How can 'not-hot not-cold' touch be a special quality [of earth] while it is found both in earth and in air?

153. * "If it [i.e., 'not-hot not-cold' touch] is a special quality in its being a subordinate generic character ['not-hot-not-cold-touch-ness'] between the property of resulting from 'cooking' and the property of not resulting from 'cooking', then conditional fluidity would also be a special quality in its being a subordinate generic character ['conditional-fluidity-ness'] between the property of disappearing and the property of not disappearing in prolonged contact with fire.

154. "Therefore, it would be meaningless to list conditional fluidity as a general quality,

155. "or one would have to list 'not-hot not-cold' touch [as a general quality].

156. tataś ca vāyor bāhyendriyagrāhyaviśeṣaguṇapātho nirarthakaḥ syāt.

M and Bh omit this text.

157. seyam ubhayataḥ pāśārajjuḥ.

158. maivam.

M maivam –

159. avāntarajātibhe[1]dasya (2→ kṣīrekṣuguḍamādhuryādivad ←2) anubhavasiddhatvāt[3].

1 Bh avāṃtarajābhe°; (2→ ←2) M °syekṣukṣīramādhuryādivad; Bh °sya ikṣukṣīramādharyādivat; 3 M °tvāt,

160. anyathā mahāndhakāre sparśopalambha[1]mātreṇa vāyur vātīti pratyayo na syāt.

1 Bh °lambha°

161. na (1→ caivaṃ ←1) sati naimittikadravatvasyāvānta[2]rajātibhedānu[3]bhavaḥ.

(1→ ←1) Bh ni°; 2 Bh °syavāṃta°; 3 Bh °bhenu°

162. vāyusparśaḥ (1→ *pṛthivivṛttivṛttipṛ* ←1)(2→ thivī[3]tvā[4]rahitavṛttivṛtti ←2)tvarā[5]hitaguṇatvavyāpyajātimān[6] apākaja(7→ spa[8]rśatvāt ←7) tejaḥsparśavad[9] ity anumānāt.

(1→ ←1) M pṛ tha°; (2→ ←2) G °vṛtt°; 3 P-1, Bh *pṛthivīvṛttipṛ°*; 4 P-2 °pṛthivivīvṛttitva°; 5 Bh °vṛttira°; 6 G °mān,; (7→ ←7) G °sparśatejaḥspa°; 8 M °tvāt,; 9 Bh tejasparśad

163. pṛthaktvāsamavetasarvānyonyābhāvasamānādhi(1→ karaṇaika ←1)dravyasamavetavatī saṃkhyā.

(1→ ←1) G °raṇadra°

164. (1→ ādāv ←1) indriyasannikarṣaghaṭanād ekatvasāmānyadhīr[2] ekatvobhayago[3]carā matir[4] ato dvitvaṃ[5] tato jāyate/[6]

(1→ ←1) Bh ādāv aṃ°; 2 G °dhīḥ., 3 M ekatvadvayago°; 4 G matiḥ.; 5 G °tvam.; 6 V, G °te

165. (1→ dvitvasya pramitis ←1) (2→ ←2) tato'pi parato[3][6] dvitvapramānanta[4]raṃ (5→ dve dravye iti dhīr iyaṃ ←5) nigaditā dvitvodayaprakriyā//

(1→ ←1) P-1, P-2, M, Bh dvitvatvapramitis; V dvitvatvapramitiḥ; G dvitvapramitiḥ; (2→ ←2) V svato 'pi; Bh tato; 3 G parataḥ.; Bh paramato; 4 Bh °aṃta°; (5→ ←5) G dve dravye iti dhīḥ. iyaṃ.; 6 Bh °yāḥ//

166. saṃkhyāsamavetatva[1]rahitasaṃkhyāsamavāyisama(2→ vetavat ←2) parimāṇam.

1 G °vetva°; (2→ ←2) M °vetasamavetavat

167. śabdāsamavāyikāraṇasa[1]mavetatvarahitasarvānyonyābhāvasamānādhikaraṇasamavetaparimāṇāsamavāyisamavetatvarahitādhikaraṇaṃ pṛthaktvaṃ[2].

1 Bh °vāyisa°; 2 Bh °tvaṃ.

156. "In which case then, it would be meaningless to list a special quality of air that can be perceived by the external sense-organs [i.e., the tactile organs].

157. "This is a snare that catches you on both sides."

158. [We reply:] Not so,

159. for one can actually experience a certain subordinate generic character [i.e., that of touch], just as one experiences the sweetness of milk, sugar-cane, and dry sugar.

160. Otherwise, when in complete darkness, one would have no notion that the air is blowing merely through experiencing touch.

161. This being the case, there would be no recognition of the subordinate generic character of conditional fluidity [i.e., 'conditional-fluidity-ness'].

162. * The touch of air possesses that [generic character] which (1) is pervaded by quality-ness, (2) lacks occurrence in that which occurs both in (a) earth and (b) that which lacks earth-ness [i.e., non-earth],
because it is the touch of that which does not result from 'cooking',
like the touch of fire.

163. * Number possesses that [generic character] which (1) inheres in that which has one substance for its substratum, and (2) [inheres] in that which has the same loci as the mutual absence of all [its substrata], but (3) does not inhere in separateness.

164. * At first, through the connection [in the form] of contact with a sense-organ, the notion of the universal 'one-ness' (*ekatvasāmānya*) is born. Then there arises a cognition (*mati*) which has both one-nesses for its object, and [the number] two (*dvitva*) is born.

165. * Then comes the valid cognition (*pramiti*) of the universal 'two-ness' (*dvitvatvasāmānya*), and after this the cognition of [the quality] two; thereupon the cognition '[there are] two substances'. We thus explain how [the number] two arises.

166. * Measure possesses that [generic character] which (1) inheres in the non-inherent cause of number, but (2) does not inhere in number.

167. * Separateness is a locus of that [property] which (1) does not inhere in the non-inherent cause of measure, (2) inheres in that which possesses the same loci as the mutual absence of all [its substrata], and (3) does not inhere in the non-inherent cause of sound.

168. (1→ kālāvṛttyavṛttivibhāgāsamavāyisamavetatvarahitapradhvaṃsapratiyogitvānad- ←1) (2→ ←2) hikaraṇasamavetatvānadhikaraṇaguṇatvasākṣādvyāpyajātyadhikaraṇaṃ saṃyogaḥ.[3]

(1→ ←1) V, M, G, and Bh omit this part. (2→ ←2) P-1, Bh °vibhāgāsamavetetarābhāvāvirodhisamaveta°; P-2 °vibhāgāsamaveta' kṣaṇiketaretarābhāvāvirodhisamaveta°; V, G °vibhāgāsamavetatvābhāvāvirodhisamaveta°; M °vibhāgāsamavetākṣaṇiketarabhāvavirodhyabhāvetarābhāvāvirodhisamaveta°; 3 V °yogaḥ?.

169. (1→ saṛvānyonyābhāvasamānādhikaraṇasamavetavibhāgāsamavāyisamavetatvarahita ←1) śabdāsamavāyisamavetavān[2] saṃyogaḥ

The underlined part being in small letters, the other part is in large letters. (1→ ←1) P-1, P-2, P-3, V, M, G *vibhāgāsamaveta*sarvānyonyābhāvasamānādhikaraṇasamaveta°; 2 P-1, P-2, P-3, V, M, G °tavān vā; Bh omits this text.

170. saṃyogāsamavetasarvānyonyābhāvasamānādhikaraṇasamaveta(1→śabdāsamavāyisamave(2→←1)tavān vibhāgaḥ.←2)

(1→ ←1) P-1 °śabdāsamavetavān; (2→ ←2) M °tavān, saṃyogāsamavetasaṃkhyātvādicatuṣṭayānyakālavṛttivṛttiguṇatvavyāpyajātimān vā vibhāgaḥ.

171. viśeṣaṇatayā parapratyayanimittaṃ paratvam.

172. viśeṣaṇatayā aparā[1]pratyayanimittaṃ[2] aparatvam.

1 P-2 aparatva°; M 'para°; 2 Bh °mittaṃ apa°

173. arthaprakāśo buddhiḥ.

174. yasmin saty anurāgaś[1] tat sukham.

1 M °gaḥ,

175. yasmin sati dveṣaś[1] tad duḥkham.

1 P-2, V anudveṣas

176. prārthanā icchā.

177. jvalanātmako dveṣah.

178. utsāhaḥ prayatnaḥ.

V, G prayatna utsāhaḥ.

179. ādyapatanāsamavāyikāraṇaṃ gurutvam.

180. ādyasyandanā[1]samavāyikāraṇaṃ dravatvam.

1 Bh °yaṃda°

181. dravyaniṣṭhatvara[1]hitātmaviśeṣaguṇaniṣṭhatvarahitaparatvāparatvaniṣṭhātyantā[2]bhāvapratiyogijā[3]timad asamavāyikāraṇaṃ[4].

1 P-2, V, G dravatvani°; 2 P-2, V, G °āparatvātyantā°; 3 P-2, G °yogisattāvāntarajā°; V °yogisattāvāntarajā°; 4 V, G °ṇaṃ snehaḥ.; M and Bh omit this text. V and G have Text 184 between Text 180 and Text 181.

168. * Conjunction is a substratum of the generic character [i.e., conjunction-ness] that (1) is directly pervaded by quality-ness, (2) is not a substratum of the property of inhering in non-substrata of the property of being a counter-positive of the absence-after-disappearance, (3) does not inhere in the non-inherent cause of disjunction, and (4) does not occur in that which does not occur in time.

169. * Or, conjunction possesses that [generic character] which (1) inheres in a non-inherent cause of sound, (2) inheres in the possessor of the same loci as the mutual absence of all [its substrata], and (3) does not inhere in disjunction.

170. * Disjunction possesses that [generic character] which (1) inheres in a non-inherent cause of sound, (2) inheres in a possessor of the same loci as the mutual absence of all [its substrata], and (3) does not inhere in conjunction.

171. Farness, by acting as a qualification, is the cause of the notion '[it is] far'.

172. Nearness, by acting as a qualification, is the cause of the notion '[it is] near'.

173. * Knowledge is that which illuminates objects.

174. Happiness is that to which we are attached.

175. Pain is that which we hate.

176. Desire is wish.

177. Hatred is a burning [sensation].

178. * Effort is endeavor.

179. * Heaviness is the non-inherent cause of the initial lapse.

180. * Fluidity is the non-inherent cause of the initial flux.

181. * A non-inherent cause is that which possesses the generic character which (1) is the counterpositive of a constant absence occurring in farness and nearness, (2) lacks occurrence in the special qualities of soul, and (3) lacks the property of residing in a substance.

182. dravyatva[1]rahitadhvaṃsānyātmaviśe[2]ṣaguṇamātranimittatvara[3]hitātmaviśe[4]ṣagu-(5→*ṇatvarahitarasasparśasnehasaṃyogavibhāgaviśeṣavyatiriktabhā*←5)[6]vatvaṃ.

1 V, G dravatva°; 2 V, G °sānyatvavi°; 3 V, G °mātrajanakara°; 4 V, G °tātyantaviśe°; (5→ ←5) V °ṇarahitabhā°; P-2 °*ṇatvarahitabhā*°; G °ṇamātrajanakarahitātyantāviśeṣaguṇarahitabhā°; 6 V °tvaṃ samavāyikāraṇam; G °tvaṃ samavāyikāraṇaṃ snehaḥ.; M and Bh omit this text.

183. snehaḥ saṅgrahā[1]hetuḥ.

1 P-2 °hādi°; V? snehaḥ. saṃgrahādihetuḥ.; M sa ca saṅgrahādihetuḥ.; G, Bh saṅgrahādihetuḥ.; M and Bh have this text between Text 184 and Text 185.

184. pṛthivī(1→vṛttyavṛtti←1)(2→rasasamānādhikaraṇavṛtti←2)(3→guṇatvaśa←3)kṣādvyāpyajātimān snehaḥ.

(1→ ←1) P-1, Bh °vṛttivṛtti°; M °vṛtti°; (2→ ←2) P-1, M, Bh °tvarahitātmaguṇāvṛtti°; V °rasasamānādhikaraṇa°; (3→ ←3) P-1, V, G, Bh °śabdāvṛttiguṇa; M °sabdā ttiguṇa°; V and G have this text between Text 180 and Text 181.

185. gaganasamavetasamavetatvarahitamūrttāmūrtta[1]sama(2→vetasamavetavān←2) saṃskāraḥ.

1 V, M, G °mūrtāmūrta°; (2→ ←2) M, Bh °samavetavān

186. vihitakriyāsādhyaḥ[1] puṅguṇo[2] dharmaḥ.

1 P-2, V, G °yayā sādhyaḥ.; 2 M °sādhyapuṃguno; Bh puṃguṇo

187. niṣiddhakriyāsādhyaḥ[1] puṅguṇo[2] 'dharmaḥ[3].

1 P-2, V, G °yayā sādhyaḥ.; Bh °yāsā; 2 M °sādhyapuṃguṇo; G, Bh puṃguṇo; 3 Bh adharmaḥ.

188. (1→guṇatve sati śrotragrāhyaḥ←1) śabdaḥ.

(1→ ←1) P-1 śrotragrāhyo guṇaḥ; Bh atragrāhyo guṇaḥ

189. iti guṇapadārthaḥ.

M omits this text.

190. saṃyogāsamavetasaṃyogāsamavāyikāraṇasamā[1]vetavat karma.

1 P-1, P-2, P-3, V, M, G, Bh °samavāyisama°

191. tac ca pañcavi(1→dham. utkṣe←1)paṇādibhedena.

(1→ ←1) M °dham – utkṣe°; Bh °dham ukṣe°

192. tatrādhodeśavibhāgordhva[1]deśasaṃyogajanakaṃ karmo[2]tkṣepaṇaṃ[3].

1 Bh °go ūrdhva°; 2 V °ma ut°; 3 Bh °ṇaṃ.

193. ūrdhva[1]deśavibhāgādho[2]deśasaṃyogajanakaṃ karmāpa[3]kṣepaṇaṃ[4].

1 Bh urdh°; 2 M °bhāgo 'dho°; 3 G karma apa°; 4 Bh °ṇaṃ.

194. agradeśavibhāgamūladeśasaṃyogajanakaṃ karmāku[1]ñcanam.

1 G karma āku°

182. * [The defining character of a non-inherent cause is] the property of that which (1) exists, (2) is not a special quality of the soul, (3) is not the instrumental cause of soul's special qualities in general, (4) [is not the instrumental cause of] anything else, (5) [is not the the instrumental cause of] disappearance, and (6) lacks substance-ness.

183. Viscidity is the cause of coherence, etc.

184. * [Or,] viscidity is that which possesses the generic character that (1) is directly pervaded by quality-ness, (2) occurs in that which has the same locus as taste, and (3) does not occur in that which occurs in earth.

185. * Inertia possesses that [generic character] which inheres in things that (1-a) inhere in corporeal things and (1-b) [inhere] in incorporeal things, but (2) does not inhere in that which inheres in space.

186. * Virtue is that quality of man that is achieved by [religiously] prescribed acts.

187. * Vice is that quality of man that is achieved by [religiously] prohibited acts.

188. * Sound is the quality that can be perceived by the ears.

189. Here ends the chapter on qualities.

ACTION

190. * Action is that which possesses the [generic character] which (1) inheres in the non-inherent cause of conjunction, and (2) does not inhere in conjunction.

191. Action is of five sorts: throwing upwards, [throwing downwards, contraction, expansion, and motion].

192. * Of these, throwing upwards is the action that causes disjunction in the lower portion and conjunction in the higher portion.

193. Throwing downwards is the action that causes conjunction in the lower portion and disjunction in the higher portion.

194. Contraction is the action that causes conjunction in the middle portion and disjunction at the peripheries.

195. mūladeśavibhāgā[1]gradeśasaṃyogajanakaṃ karma prasāraṇaṃ[2].
1 Bh °deśasaṃyogā°; 2 Bh °ṇaṃ.

196. utkṣepaṇādyākuñcā[1]naṃ (2→ ca prayatnajam iṣṭam ←2)
M utkṣepanāpakṣepaṇākuñcanaprasāraṇaṃ ca prayatnajanyam iṣṭam,; 1 V, G °paṇākuñca°; Bh °paṇādi cañca°; (2→ ←2) P-1, V ca prayatnajaniṣṭham; G ca prayatnajaniṣṭhaṃ

197. (1→ na ced ←1) gamanasyāpi prasaṅgāt[2].
(1→ ←1) V ca; M na cet; G na ca; 2 V, G °gād; Bh prasakagāt

198. aprayatnajaṃ karma gamanaṃ[1].
1 Bh °naṃ.

199. nanu pañcaivā[1] karmāṇīti nopapadyate[2] bhramaṇādīnāṃ (3→ sattvād iti ←3) (4→ cen na ←4).
1 Bh paṃcaiva; 2 M °te,; (3→ ←3) Bh sattvā iti; (4→ ←4) M cet – na,

200. bhramaṇā(1→ dayo pi ←1) gamanaviśe[2]ṣā[3] ity uktaṃ śāstrakṛdbhir iti[4].
(1→ ←1) V °dayopi; M, Bh °dayo; 2 P-2, V, G karmavi°; 3 Bh °śeṣa; 4 V, G °kṛdbhiḥ.

201. karmā[1]padārthaḥ.
1 M, G iti karma°; V and Bh omit this text.

202. sama(1→ vetarahitasa ←1)rvānyonyābhāvasamānādhi(2→ karaṇasamavetaṃ ←2) sāmānyam.
(1→ ←1) G °tatvarahitasa°; Bh °tavattvarahitasa°; (2→ ←2) P-1, M °karaṇaṃ samavetaṃ

203. samave[1]tavattvarahitāsarvānyonyābhāva(2→ samānādhikara(3→ ṇasamavetatvarahita- samaveta ←2) ←3) viśeṣāḥ.
1 V, G, Bh °tatvarahita°; M °tavattvarahitāḥ; (2→ ←2) P-1 °samānādhikaraṇatvarahitāḥ samavetāḥ; M °sāmānādhikaraṇyarahitāḥ samavetāḥ; Bh °samānādhikaraṇatvaṃ; (3→ ←3) V, G °ṇarahitāḥ samavetara°

204. nityaḥ saṃ[1]bandhaḥ samavāyaḥ.
1 M nityasam°

205. samavetatvarahitasarvānyonyābhāvasamānādhikaraṇabhāvo vā[1].
1 Bh vā samavāyaḥ iti bhāvāḥ.

206. nañarthapratyayā[1]viṣayo 'bhāvaḥ.
1 P-2, V, G, Bh °arthaviṣayapratyaya°

195. Expansion is the action that causes conjunction at the peripheries and disjunction in the middle portion,
196. and throwing upwards, [throwing downwards], contraction, and [expansion] are considered to be [actions] that result from effort.

197. Otherwise, there would be the unfortunate result that motion is also [an action that results from effort].
198. Motion is an action that does not result from effort.

199. If someone holds that there cannot be just five actions because there is wandering, etc., he is wrong.
200. * For the author of the Śāstra [i.e., Praśastapāda] says that wandering, etc., is a special kind of motion.

201. Here ends the chapter on action.

UNIVERSAL

202. * A universal is that which (1) inheres [in things], (2) has the same loci as the mutual absence of all [its substrata], and (3) has nothing inhering in itself.

DISTINCTION

203. * Distinctions (1) inhere [in things], (2) lack the property of inhering in the same loci as the mutual absence of all [its substrata], and (3) lack the property of having that which inheres [in things].

INHERENCE

204. * Inherence is a permanent relation.

205. * Or, [inherence is] the state of possessing the same loci as the mutual absence of all [its substrata], and does not inhere [in things].

ABSENCE

206. * Absence is the object of a notion expressed by a negative particle.

207. sā[1] caturdhā bhidyate[2] prāga[3]bhāvaḥ pradhvaṃsābhāvo(4→'tyantābhāvo 'nyonyābhāvaś ceti.←4)

1 V, G sa ca; 2 V, G °te.; 3 Bh praga°; (4→ ←4) Bh °va anyonyābhāvaś ceti.

208. uttaraikāva[1]dhir abhāvaḥ prāgabhāvaḥ.

1 P-1, Bh °rakālāva°

209. pūrvaikāva[1]dhir abhāvaḥ[2] pradhvaṃsābhāvaḥ.

1 P-1, Bh pūrvakālāva°; 2 M abhā ḥ; Bh abhāva

210. (1→tādātmyapratiyogiko 'bhāvo←1) 'nyonyābhāvaḥ.

(1→ ←1) P-1, M tādātmyasaṃbandhāvacchinnapratiyogitākābhāvo

211. ubhayāvadhira[1]hitaḥ saṃ[2]sargābhāvo 'tyanta[3]bhāvaḥ.

1 Bh °vara°; 2 V, G °tasaṃ°; 3 Bh atyaṃtā°

(1) tarkāmbarāṅkapramiteṣv atīteṣu (906) śakā[1]ntataḥ/ varṣeṣūdayanaś cakre subodhāṃ lakṣaṇāvalīm//

1 V, G °teṣu śaka°; M and Bh omit this text.

(2) vidyāsandhyodayodrekād avidyārajanīkṣaye/ yad udeti namas tasmai kasmai cid viśvatas tviṣe//

M and Bh omit this text.

207. It is of four sorts: absence [of a thing] before [its] origination, absence [of a thing] after [its] disappearance, constant absence, and mutual absence.

208. * Absence [of a thing] before [its] origination is absence that has one limit at a later time.

209. * Absence [of a thing] after [its] disappearance is absence that has one limit at a previous time.

210. * Mutual absence is absence whose counterpositive is identity relation.

211. * Constant absence is the absence of a relation, and lacks limits in both directions [i.e., is endless and beginningless].

When Nine, Zero, Six, years had been measured
from the end of the Śakas [i.e., in Śaka 906, 984 A.D.]
Udayana made the *Lakṣaṇāvalī*,
which is easy to understand.

When the night is Ignorance disappears
as a result of the prominence of the dawn of Intellect,
We will salute a certain one who rises up and
gives splendor to every person and to every place.

THE END

NOTES

[1] '*Pada-artha*' literally means the object referred to by a word, but here it means a kind or category of objects referred to by words.

[2–3] The sum of *bhāva* and *abhāva* should constitute all objects of cognition, namely, the universe. One might be tempted to translate '*bhāva*' and '*abhāva*' as 'presence' and 'absence', for the counterpart of absence is not things that exist but presence. The sum of presence and absence is, however, less than all objects of cognition. Therefore, it is not correct to translate '*bhāva*' as 'presence', although, admitting some amount of laxity, one could use the word 'presence' to mean not only the presence of an entity but also the entity itself. The Sanskrit '*bhāva*' refers not only to presence but also to things that are present, i.e., existent. On the other hand, '*abhāva*' does not mean a thing or an entity that is absent. For example, when there is no pot on the desk, '*abhāva*' does not mean a pot absent from the desk; it means the absence of a pot on the desk.

Someone might say that the definition of *abhāva* (Text 3) is too limited for the following reason: A pot can be considered as an aobject of the notion 'the absence of a pot is not found there', insofar as the concept of the pot is a constituent element of this notion. We then have a difficulty: According to the definition of *abhāva*, the pot under discussion should be considered absence, because it is an object of the notion whose object or content is absence. But a pot itself is not absence. Therefore, the definition cannot be applied to the pot referred to in the notion 'the absence of a pot is not found here'.

To this objection Bhaṭṭakeśava gives a reply in the *Lakṣaṇāvalīprakāśa* (*LVP*), his commentary on the *Lakṣaṇāvalī*, as follows: The definition is concerned only with [the object of] the notion that has absence for its [entire] object. (*LVP*, p. 2, 1.7: *abhāva-viṣayakapratyayam ādāyaiva lakṣaṇanirvāhāt*.) He seems to be saying that the definition is not applicable to the object of a notion wherein absence is included simply as a constituent factor.

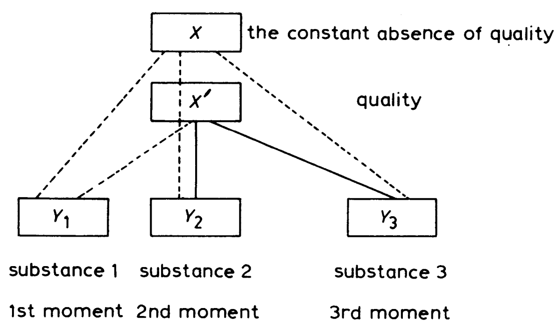
For the historical background of the concept of absence, see B. K. Matilal, *The Navya-Nyāya Doctrine of Negation, Harvard Oriental Series*, No. 46, pp. 99–103.

[5] The first four substances, i.e., earth, water, fire, and air, are found either in the form of one atom or an aggregate of atoms. The remaining five substances, i.e., space, time, direction, soul, and mind, are in the form of one atom. According to the Vaiśeṣikas, a substance in the form of one atom is permanent while a substance in the form of an aggregate of atoms is impermanent.

[9] One might define substance simply as that which possesses quality. A difficulty is presented, however, by the substance at the moment of its origin. At that brief moment the substance presupposes no quality, because, according to the Vaiśeṣika doctrine, complex entities must follow a simple entity. First the substance arises, then the quality

inheres in it. Thus the definition that substance is that which possesses quality is too limited; it cannot be applied to the substance at the moment of its origin. This problem can be avoided by saying that substance is that which is not a substratum of the constant absence (cf. Text 211) of quality. Only during its first moment is a substance without quality; it is not constantly without quality.

We can illustrate the relation of the constant absence of quality to substance as follows. Solid lines connecting the rectangles indicate occurrence; dotted lines indicate non-occurrence. (Cf. Part I, Chapter IV, Figures 1 and 2.) Note that all three line between X and the three Ys are dotted, whereas of the three lines between X' and the three Ys one is dotted and two are solid.



[10] One can analyze the long Sanskrit compound as follows:

(2) *mūrtatvarahita-samaveta-samavetatva-rahita-*

(1-b) *mūrtatvarahita-*

(1-a) *amūrtatvarahita-samaveta-*

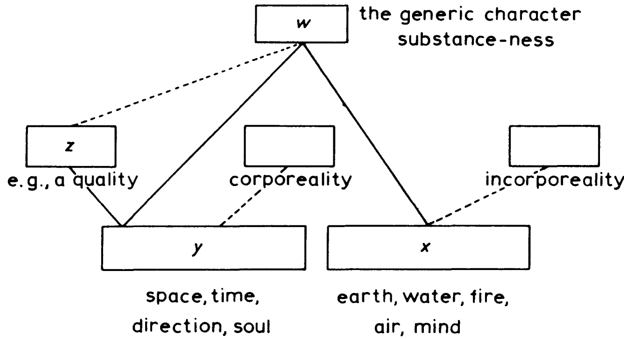
jāti-mat.

The words underlined here modify '*jāti*'. '*Mūrtatvarahita*' in (1-b) and '*amūrtatvara-hita*' in (1-a) modify '*samaveta*' in (1-a). The easiest way to understand the meaning of this long compound is to start from the end. Substance is that which possesses the generic character which may be defined by (1-a), (1-b), and (2). The generic character, of course, is substance-ness, and this is basically defined by (1-a) and (1-b). Substance-ness inheres in that which lacks corporeality (viz., space, time, direction, or soul) and in that which lacks incorporeality (viz., earth, water, fire, air, or mind).

Quality-ness and action-ness are ruled out by (1-a). Occurring only in qualities and actions, they never inhere in that which lacks incorporeality; qualities and actions are always incorporeal. (1-b) is added to avoid making the definition too narrow; without (1-b) we cannot be sure that space, etc., possesses substance-ness.

Proviso (2) rules out a universal like existence, which inheres in that (e.g., a quality) which inheres in that (e.g., space or time) which lacks corporeality. But substance-ness can only inhere in substance, and no substance can inhere in incorporeal substances. A pot inheres in its halves, impermanent substances inhere in their atoms, but no substance inheres in space, soul, or time.

We can illustrate this definition as follows:



(Three three phrases of the text: (2), (1-b), and (1-a) refer respectively to the three lines descending from the top triangle, procceding from left to right.)

That (*w*) which 'inheres in that (*x*) which lacks incorporeality' (1-a) will be symbolized as follows:

$$wA\ (w, x\tilde{B}\ (x, \text{incorporeality})).$$

Similarly, that (*w*) which 'inheres in that (*y*) which lacks corporeality' (1-b) will be symbolized as follows:

$$wA\ (w, y\tilde{B}\ (y, \text{corporeality})).$$

That (*w*) which 'does not inhere in that (*z*) which inheres in that (*y*) which lacks corporeality' (2) will be symbolized as follows:

$$w\tilde{A}\ [w, zA\ (z, y\tilde{B}\ (y, \text{corporeality}))].$$

Here '*w*' indicates substance-ness, and substance is defined as that which possesses the generic character substance-ness (*w*).

[11] *LVP* comments as follows: If substance-ness were defined merely as a generic character, the definition would overapply to pot-ness, etc. Therefore, the definition states, 'inheres in a lotus'. But in this case the definition could also apply to flower-ness. Therefore, the definition states, 'in space'. But the definition could still be applied to the existence (*sattā*) which inheres in smell. Hence, the definition states, 'but not in smell'. Thus, existence is ruled out from the definition. (*LVP*, p. 3, 1.8: *jātir dravyatvam ity ukte ghaṭatvādāv api gatam, ato 'ravindasamaveteti. etāvaty ukte 'py aravindatve gatam ato gaganeti. evam api sattāyāṃ gatam, ato gandhāsamaveteti.*)

This definition seems to have influenced the definition of substance in the *Sarvadarśanasaṃgraha* (*SDS*), which reads: Substance-ness is the permanent property of inhering not in smell but in space and lotuses. (*SDS*, p. 215, 1.2: *gaganāravindasamavetatve sati nityatve sati gandhāsamavetatvam.*) What made the definition popular may have been its playfulness, a character that other definition below will share. On first hearing, one naturally takes *gaganāravinda* as a *tatpuruṣa* compound, meaning a lotus in space, instead of as a *dvandva* compound, meaning space and a lotus. Thus the definition

at first glance, may seem nonsensical. Only on reflection does one see that it makes very good sense.

[12] Skt., *Samaveta-samaveta-samavetam*: The whole is a *bahuvrīhi* compound of which the prior member (*Samaveta-samaveta-*) is also a possessive (*bahuvrīhi*) compound. One can explain in three stages.

(1) A substance (is an entity that) has a *samaveta-samaveta* inhering in it.

(2) A *samaveta-samaveta* is that which has a *samaveta* inhering in it.

(3) A *samaveta* is an inhering entity, i.e., substance, quality, action, universal, or distinction.

(2) A *samaveta-samaveta* must be a substance, quality, or action. Universal and distinction, in which nothing can inhere, are ruled out.

(1) A *samaveta-samaveta-samaveta* must be a substance. Quality and action, which cannot inhere in quality and action, are ruled out.

[14–17] The Mīmāṃsakas, such as Kumārila, maintain that darkness is a substance. They define substance as that which possesses a quality and an action. Darkness satisfies that condition, the Mīmāṃsakas think, because it is black and moves. According to the Vaiśeṣikas, however, darkness is not a substance.

LVP comments on the second branch of Text 14 as follows: If it were said, 'because it is perceived', it would be overapplied to soul, etc. In order to rule out that possibility, it adds, 'by the eyes'. Still it would be overapplied to a pot, etc. Therefore, it states, 'without the aid of light'. (*LVP*, p. 3, 1.22: *grāhyatvād ity ukte ātmani vyabhicāraḥ, tadvāraṇāya cakṣuḥpadam. evam ukte ghaṭādau sa iti ālokanirapekṣeti.*)

Udayana uses the absence of light as the example (*dṛṣṭānta*) in the syllogism (cf. Text 14). According to the Nyāya philosophy, darkness, which is the *pakṣa* here, is considered to be nothing but the absence of light. But the *pakṣa* and the example mentioned in a syllogism must be different. Hence, the Naiyāyikas might raise the objection that Udayana is making a mistake by citing the same thing for both the *pakṣa* and the example. However, Udayana distinguishes darkness from the absence of light for the following reason (cf. Text 15–17): One is not sure whether or not the *pakṣa*, i.e., the property-possessor, is qualified by that which is to be proved to exist (*sādhyadharma*), although one already knows that a *sapakṣa* is qualified by that which is to be proved to exist.

[18] Cf. Text 14.

[19] Here earth is defined in the same way as substance is defined in Text 9.

[20] Another playful definition (cf. Note to Text 11); *vājiviṣāṇa* is not a *tatpuruṣa* like *śaśaviṣāṇa* (the horn of a rabbit), but a *dvandva*. *LVP*'s explanation of this text is similar to its explanation of Text 11: If it stated the defining character of earth-ness is a generic character, this would also apply to pot-ness, etc. Therefore, the text states, 'which inheres . . . in a horn'. But the defining character would still overapply to horn-ness. Hence, the text states, '[inheres in] a horse'. If it said, 'a generic character that inheres in a horse but does not inhere in hailstones', it would overapply to a horse. Therefore, the word 'horn' is employed. The words 'generic character' are employed

to exclude 'two-ness' that inheres in both a horse and a horn. (*LVP*, p. 4, 1.13: *jātiḥ pṛthivītvam ity ukte ghaṭatve gatam, ato viṣāṇasamaveteti. evam sati viṣāṇatve gatam ato vājipadam. karakāsamavetavājisamavetajātir ity ukte vājitve gatam ato viṣāṇapadam. vājiviṣāṇobhayagatadvitvavāraṇāya jātipadam.*)

23 Udayana proves the existence of the atom by proving that there is an established substratum, viz., permanent earth, in which earth-ness can reside. *LVP* says: In order to prove the existence of the atom, the text says, 'earth-ness . . . ' If the text said, 'because it is a generic character', there would be overapplication to pot-ness. Therefore, the words 'occurring in cloth' are employed. To rule out the possibility of cloth-ness, the word 'pot' is employed. The words 'generic character' rule out 'two-ness' residing in a pot and cloth. (*LVP*, p. 4, 1.23: *paramāṇusadbhāve mānam āha pṛthivītvam iti, jātitvād ity ukte ghaṭatve vyabhicāraḥ syād ataḥ paṭavṛttīti. paṭatvavāraṇāya ghaṭapadam. ghaṭapaṭobhayavṛttitvavāraṇāya jātipadam.*)

25–27 By showing that earth-ness is found not only in a pot but also in cloth, Udayana refutes the following objection: Earth-ness, the *pakṣa* here, is not established because its substratum is not established (*āśrayāsiddha*) (cf. *NMV*, p. 22, 1.22.). In order to prove the existence of earth-ness, all we need do is to show that there are two substances which can be differentiated by means of earth-ness from a third, while not being differentiated *qua* earth-ness from each other.

28 In Text 23 existence (*sattā*) is mentioned as the example (*dṛṣṭānta*) in the syllogism. Here Udayana ascertains the existence of this example by proving that existence occurs in an established substratum, i.e., space. It is Udayana's method to ascertain the existence of a property by proving that the substratum in which the property can reside is established.

29 As we have already seen (cf. Note 25–27), according to the Vaiśeṣikas, a group or set of only one member cannot possess its own generic character. Space, for example, is one in number. Hence, there cannot be a generic character such as space-ness. Earth, water, fire, and air can have respectively the generic characters earth-ness, water-ness, fire-ness, and air-ness. Even though space cannot have the generic character space-ness, it can have at least two other generic characters: substance-ness and existence. Therefore, in this case, 'a generic character that is different from substance-ness' refers to existence.

One may show that a pot possesses earth-ness and substance-ness, and that space possesses substance-ness, etc. But one has not hereby proved that a pot or space possesses existence (*sattā*). Why do they have to possess a generic character more extensive than substance-ness? The answer is that the substances possess some imposed properties (*upādhi*) which cannot be established by means of their substance-ness. That space possesses sound (*śabda*) can be explained by its substance-ness. That it possesses 'the property of being an element' (*bhūtatva*), however, cannot be so explained, because some substances, such as time and soul, do not possess 'the property of being an element'. (Earth, water, fire, air, and space are called elements.) We cannot explain this state of affairs by positing a generic character called *bhūtatva* (element-ness), because such a generic character would be cross-connected with 'the property of being corporeal' (*mūrtatva*). (Earth, water, fire, air, and mind are corporeal.) The only generic character

by which we can explain space's possession of *bhūtatva* is existence (*sattā*). Space possesses a quality because of its substance-ness. It is an element because of its existence.

[31] In Text 29 substance-ness is mentioned as one of the factors contained in the thing to be proved (*sādhyadharma*), i.e., a generic character that is different from substance-ness. If substance-ness did not exist, there would be the logical fault that the *sādhyadharma* would not be established. Hence, Udayana proves the existence of substance in order to prove that the *sādhyadharma* is established.

[32] 'A generic character that does not occur in color' refers to substance-ness. In Texts 29 and 32 Udayana gives space as the substratum of both existence and substance-ness. Note that Udayana proves the existence of a property by proving the existence of its *dharmin*.

[35] 'Final' means to be complete. The qualification 'final whole' rules out the over-application to parts of a body. Cf. *TSD*, p. 31, l.6.

[36] Cf. *KV* (B), 54, 12; *LM*, p. 23.

[43] Cf. Text 23.

[48] Cf. Part III, the section on water, Note 23.

[49] The plural form, 'atoms' (*paramāṇavaḥ*), is employed to indicate that one atom alone cannot compose a body. First two atoms compose a diad, then three diads compose one triad. Thus, atoms can indirectly compose aggregates of atoms. Cf. Part I, Chapter V, F.

[54] Cf. *NSM*, p. 19, 1.20.

[57] Among the nine substances, the six substances beginning with air have no color. Hence, these six are ruled out first. Earth and water have taste, but these are ruled out by the condition, 'which has the common locus as the constant absence of taste'. Fire is the only remaining possibility.

One might suspect that time and the like can be loci of color. To this question *LVP* replies as follows: [For *x*] to be a locus [of *y*] means that [*y*] inheres in [*x*]. Therefore, the definition is not to be overapplied to time, etc. (*LVP*, p. 9, 1.16: *adhikaraṇatvaṃ ca samavāyena vivakṣitam. tena na kālādāv atiprasaṅgaḥ.*) Although time, etc., can be substrata of color, color does not inhere in time, etc.

[58] Cf. Texts 11, 20, and 41.

[59] The compound found in the expression of the mark (*hetu*) (1.3–5) is intended to furnish a reason why fire-ness must occur in both lightning and *ākaraja* (gold and gems). The obvious reason is that the fire of lightning is not different from gold or a gem although gold or a gem is different from lightning. *Ākaraja* and lightning are simply two different forms of fire (*tejas*). This is why fire-ness inheres in both of them. Cf. Texts 26, 81, 84, 128, 138, and 140.

[63–64] Fluidity belongs only to three substances: earth, water, and fire. The fluidity of any earth substance disappears if that substance is heated intensely for a long time. For example, butter and fat, which are made of earth, melt when heated, then burn when heated further, and finally become solid. On the other hand, gold, etc., which the Vaiśeṣikas consider to be made of fire, does not become solid if the heat is maintained. The fluidity of water is natural. Cf. *NSM*, ad 42 (p. 20, 1.22); *TSD*, p. 36, 1.7.

[67] 'Lightning' rules out 'gold-gems-ness' (*ākarajatva*); 'gold and gems' rules out lightning-ness. There is no overapplication to the number two found in the two things, i.e., lightning and 'gold and gems'; the number two is ruled out by the words 'generic character'.

[71] Cf. *NSM*, ad 41 (p. 20, l. 14).

[72] When one wants to see an object, he brings the visual organ, viz., the instrument of perception, into action in order to see the object. The action of seeing is indicated by the verbal root √*dṛṣ* (to see). Therefore, the existence of the action of seeing is, according to Udayana, ascertained.

[78] Cf. *KV*, (B) 76, 7.

[80] The P edition gives in the footnote the following reading of another edition. (*Mūlādarśaprathamapustaka* = P-1): *rūpātyantābhāvasamānādhikaraṇasparśādhikaraṇo vāyuḥ*. (Air is the locus of that which has the same loci as the constant absence of color.) Cf. Text 57.

[81] 'Being (1) something other than sound, and (2) that which lacks touch-ness' means to be color, taste, smell, etc., which occur in fire, water, and earth. Since touch lacks the property of being one of these, it must occur outside of fire, water, and earth, that is, in air or space. It cannot occur in space because it is different from sound, which is the special quality of space. But it must occur in a colorless substance because it is, like sound, different from color, taste, and smell. Hence, it occurs in air. The underlying idea is that there are at least two entities occurring in a colorless substance.

[84] This proof is essentially the same as Udayana's proof that earth-ness inheres in the permanent atoms of earth (Text 23). In both cases the point is that the generic characters (earth-ness, air-ness) are unitary. The air-ness that inheres in atoms of air is not a different entity from the air-ness that inheres in non-permanent air.

The reason why Udayana phrases his proof differently here from the way it was phrased in the cases of earth, water, and fire is that in each of those cases he could establish a generic character by finding two subsets of substances in which their generic characters could inhere, i.e., in pots and cloth, hail and snow, lightning and gold. But there are no subsets of air. So he simply says that the air-ness in the atoms is not another entity than the air-ness in non-permanent air.

[87] The P-1 manuscript (P ed., p. 33, Note 2) and one commentator (Śeṣaśārṅgadhara, P ed., p. 33, 1.7) read *utpādyendriya* in place of *bāhyendriya*. The two words mean the same thing because mind (*manas*) is excluded by both terms. Mind is considered as the internal sense-organ.

[93] This text is missing in the M edition and the P-1 manuscript. The P edition has this passage in parentheses. All the versions except the Bh mss. reads '*saṃyogajanyajanya* . . . ', but it should read '*saṃyogājanyajanya* . . . '. This is the definition of space given by *SDS* (ed. by Abhyankar, pp. 218–219), and in the *Nyāyakośa*, s.v. *ākāśa*.

Space, being only one, has no generic character; so it cannot be defined by a generic character, as earth, etc., were defined. But being eternal it will have an attribute of distinction (*viśeṣa*) inhering in it. We may use this attribute in our definition. 'Space is the locus of that distinction which has the same locus as sound'. But instead of sound, the definition says 'a produced *viśeṣa-guṇa* (special quality) that is not produced by conjunction'. One may see by exclusion that such a *viśeṣa-guṇa* can only be sound.

As we shall see in Text 121, Udayana considers the following sixteen as special qualities: (1) color, (2) taste, (3) smell, (4) touch, (5) viscidity, (6) natural fluidity, (7) knowledge, (8) happiness, (9) pain, (10) desire, (11) hatred, (12) effort, (13) virtue, (14) vice, (15) mental impression, and (16) sound (cf. Note on Text 121 of *LV*). Of these, (1), (2) and (4), when present in earth, are produced by 'cooking (*pākaja*) or produced by conjunction (*saṃyogaja*). Hence, they are ruled out. (3), (5), and (6) are not produced: (3) always resides in earth, and (5) and (6) are always found in water. Therefore, they are also ruled out. The qualities from (7) up to (15), which belong to the soul, are produced by conjunction, and are therefore also excluded. Thus, sound alone is left. It can have three origins according to Praśastapāda: produced by conjunction, by disjunction, or/and by sound (*PBh*, G. edition, p. 262, 1.7). The first sound in a sound-wave emission is produced by conjunction and disjunction; the remaining sound-waves are produced by the preceding sounds. Therefore, some sounds are 'not produced by conjunction' (*saṃyogājanya*). In other words, they are produced by disjunction and by sound. Thus sound fits the definition.

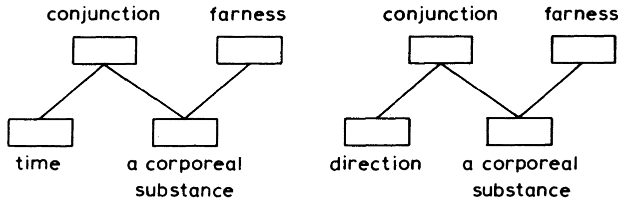
[95–97] Substrata of touch are earth, water, fire, and air. According to Text 95, sound does not reside in these four substances. On the other hand, time, direction, soul, and mind are perceived by the internal sense-organ while sound is perceived by the external one. According to Text 96, sound does not reside in these four substances. Thus, space is the only possibility left.

[99–100] For the substances considered up to this point, Udayana has proved their existence either by their possession of a special quality (e.g., the smell of earth, the sound of space), or by their possession of a special generic character (earth-ness, water-ness, etc.). Now we come to time (*kāla*), which has no generic character because it is one in number, and has no special quality because its five qualities (number, measure, separateness, conjunction, and disjunction) are common to other substances.

Udayana proves the existence of time by its being a locus of the non-inherent cause (*asamavāyi-kāraṇa*) of the quality temporal farness (*niyata-paratva*). Qualities are generally produced by two sorts of causes: (1) a cause in which qualities inhere (an inherent cause, *samavāyi-kāraṇa*, for example, the cloth which is the inherent cause of the redness of the cloth) and (2) a cause in which qualities do not inhere (a non-inherent cause, *asamavāyi-kāraṇa*, for example, the redness of the threads that compose a cloth). Any quality that is produced must have a non-inherent cause.

Farness (*paratva*) is of two sorts: exact (or temporal, *niyata*) and inexact (or directional, *aniyata*). It is called exact because what is later to me is also later to you, whereas

what is east of me may be west of you. Farness may reside only in corporeal substances. The non-inherent cause of temporal farness is the conjunction of time with a corporeal substance, and the non-inherent cause of directional farness is the conjunction of direction with a corporeal substance. Therefore, (2) of Text 99, i.e., 'the inherent cause of the non-inherent cause of farness' may mean direction, time, or a corporeal substance. Direction is excluded by (1); and corporeal substances, by (3).



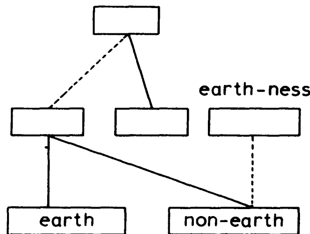
[103] Cf. Note to Texts 99–100.

[108] Here 'products' means qualities and actions, and 'an abode of products' means a substance alone. Therefore, (1) rules out members of all categories other than substance, and among substances (1) rules out space, which is the substratum of sound (cf. *LVP*, p. 14, 1.17.). (2) rules out direction, time, and all corporeal substances. (*NMV*, p. 44, 1.13: *dikkālasarvamūrtavyāvartanāya*). Farness (*paratva*) may reside in any corporeal substance. For the meaning of 'products', see Text 111.

[109] Here Udayana proves the existence of soul in the same way he proved the existence of space in Text 94. According to him, insofar as knowledge is a quality, it should occur in its substratum, and furthermore the substratum must exist. Otherwise, qualities themselves, which are supposed to reside in their substrata, could not exist. Therefore, soul, the substratum here, exists.

[112] If permanent substances other than a body, etc., did not exist, *apūrva* (the non-immediate consequence of a cause), being then based upon the body, would be destroyed along with the destruction of the body. Accordingly, sacrifices, such as the *jyotiṣṭoma* sacrifice, could not have resulted in a heaven which must last a long time, and the Vedas, which are supposed to give the instructions concerning heaven, would lose their authority. (*LVP*, p. 14, 1.19.)

[121] One can illustrate the content of this definition as follows:



In short, a special quality is defined as a quality that resides in either earth or non-earth, but not in both. There are sixteen special qualities all together: (1) color, (2) taste, (3) smell, (4) touch, (5) viscidity, (6) natural fluidity, (7) knowledge, (8) happiness, (9) pain, (10) desire, (11) hatred, (12) effort, (13) virtue, (14) vice, (15) mental impression (*bhāvanā*), and (16) sound. (Cf. *BhP*, v. 91; *LVP*, p. 15, 1.20; *PBh*, p. 95, 1.24.) Of these sixteen qualities, (3) resides only in earth, (5)–(16) do not reside in earth. Therefore, one can see that these thirteen qualities are special qualities. One might doubt whether the other three, i.e., (1), (2), and (4), are special qualities because they are found in both earth and non-earth. But here one has recourse to *pākaja* color, taste, and touch, which are found only in earth. Cf. Text 162.

126 *LVP* explains as follows: If quality-ness were defined as 'that which inheres in things', the definition would overapply to conjunction-ness. In order to rule this out, the definition says, 'possesses that which inheres in non-conjunction'. To rule out the possibility of disjunction-ness, the definition adds, 'conjunction'. The portion ending with '*rahita*' [i.e., (2)] is added to exclude existence. (*LVP*, p. 16, 1.4: *samavetam ity ukte saṃyogatve gataṃ, tannirāsārtham asaṃyogeti. vibhāgatvanivṛttyai saṃyogeti. sattānivṛttyai rahitāntam.*)

According to Śeṣaśārṅgadhara, the part which we have labelled (1) excludes substance from the thing to be defined, (2) excludes action (cf. P ed., p. 51, l. 21–22). The latter part may need some explanation. There are two sorts of conjunction: (a) conjunction caused by a previous conjunction, as the conjunction of the threads of a cloth with the cloth itself is caused by the conjunction of the threads with the threads; and (b) conjunction caused by action, as when a hawk lands on a post. In our present definition we must specify the second sort of conjunction, for the non-inherent cause of this sort is an action, whereas the non-inherent cause of the first sort is a quality. Without the words '*saṃyogājanya*' (that which does not result from conjunction) our definition would be self-defeating.

127 One can produce Text 127 merely by replacing 'conjunction' in Text 126 with 'disjunction'.

131 Udayana defines color as in the case of substance-ness (Text 11), earth (Text 20), and water (Text 41). This means that the basic theory that a generic character can be found in a set whose members are, at least, two, is valid not only in the case of substance but also in the case of quality. That is to say, as far as a generic character and substrata of the generic character are concerned, Udayana deals with substance and quality in the same way.

135 If the visual organ were defined only as 'that which perceives color', the fault of circular definition would apply. But one may define the *cakṣu* by its physical position as well as by its epistemological position.

136 My translation is based upon the reading of V and G, which reads: . . . *śuklatvarahitanīlānyatvarahitatvāt*. . . . Cf. Texts 81 and 84.

138 The Bh, G, and V editions have 'a blue object (*nīlam*)' instead of 'the color

blue (*nīlaḥ*)'. Texts 126–128 prove the existence of quality-ness; Texts 131–136, the existence of color-ness. Text 138 proves the existence of the 'color-blue-ness'. Thus three levels are set out in the hierarchy of generic characters residing in qualities.

148 In translating this text, I followed Śeṣaśārṅgadhara who takes the negative prefix *a-* of *apākajarūpādhikaraṇatvāt* for qualifying *-adhikaraṇa*, not *-pākaja*. Cf. *NMV*, p. 55, l. 1–2: *na pākajarūpādhikaraṇam apākajarūpādhikaraṇaṃ pākajarūpānadhikaraṇatvād ity arthaḥ*. Among the colors of substances, it is only the color of earth that results from 'cooking' (*pākaja*), and it is only in earth that smell resides. Therefore, it something is not a substratum of the color which results from 'cooking', it is not a substratum of smell.

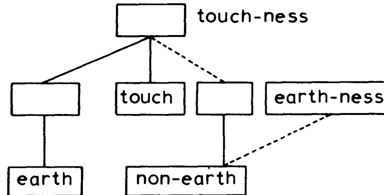
153 The opponent takes 'not-hot not-cold' touch for the combination of 'not-hot' touch and 'not-cold' touch. Focusing on the former, he admits the existence of the generic character *apākajatva* (the property of not resulting from 'cooking'). For example, air does not become hot until it is 'cooked' or heated. Then, focusing on the latter, he admits the existence of the generic character *pākajatva* (the property of resulting from 'cooking'). Air becomes not-cold when it is 'cooked' or heated.

162 My translation is based upon the reading of the edition *Mūlādarśaprathama-pustaka* (P-1) quoted in the footnote to this text of the P edition, and the Bh mss.: *pṛthivīvṛttipṛthivītvarahitavṛttitvarahita*. . . . We have come across this compound in Text 121, where special quality is defined.

Text 162 means that the touch of air does not occur in earth, because it does not result from 'cooking', just as the touch of fire does not result from 'cooking'. The point is that the touches of air and fire do not result from 'cooking' while the touch of earth does.

It seems to me that the reading of the P edition and M edition does not make sense. The reading of these two editions runs as follows:

The touch of air possesses the generic character which (1) is [directly] pervaded by quality-ness, (2) inheres in that which inheres in earth, and (3) does not inhere in that which inheres in that which lacks earth-ness, ... (P, p. 56, 1.15: *vāyusparśaḥ pṛthivīvṛttivṛttipṛthivītvarahitavṛttivṛttitvarahitaguṇatvavyāpyajātimān* . . . .) One can illustrate the content of this definition as below:



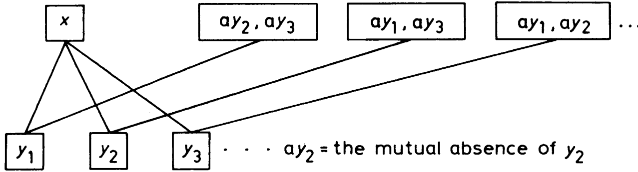
Proviso (2) in the P edition indicates that the generic character to be defined here (i.e., touch-ness) inheres in that which inheres in earth. Proviso (3) indicates that the generic character does not inhere in that which inheres in non-earth. In short, (2) and (3)

indicate that the generic character in question resides only in earth. This definition, however, does not distinguish the touch of earth, which results from 'cooking', from the touch of air, which does not. The point of the definition given in Text 162 is that the touch of air, which is not *pākaja*, is different from the touch of earth, which is *pākaja*. Therefore, it seems that the P edition does not make sense.

163 '*Ekadravya*' (lit., one-substance), being a possessive compound, means 'that which has one substance for its substratum'. Substance-ness, color, taste, smell, disjunction, etc., have more than one locus. Therefore, they are ruled out by (1). Praśastapāda informs us that number is a quality which sometimes inheres in a single substance and sometimes inheres in more than one substance (*PBh*, p. 111, 1.3: *sā punar ekadravyā cānekadravyā ca*). It is only the number one (*ekatva*) that is '*ekadravya*', i.e., that which inheres one substance. But this property of being able to inhere in a single substance distinguishes number from all other qualities except separateness. An action, however, may have only one locus; action-ness inheres in that which has one substance for its substratum. (2) excludes an action.

'That which has the same loci as the mutual absence of all [its substrata]' (*sarvānyonyābhāvasamānādhikaraṇa*) means that which possesses at least two loci (or that which inheres in more than one thing [*anekasamaveta*]).

For example, pot-ness inheres in more than one substratum, i.e., a pot and it is only common sense that all pots are different from each other. Pot 1, for example, is different from pot 2, pot 3, and so on. To use Indian terminology, pot 1 'possesses mutual absences' of pot 2, pot 3, pot 4, and so on. Thus, pot 1 possesses the mutual absences of all the pots other than itself. Similarly, pot 2 possesses the mutual absences of pot 1, pot 3, and so on. Since pot-ness resides in pot 1, pot-ness possesses the same locus, pot 1, as the mutual absence of all the pots except pot 1. Pot-ness resides in pot 2, and pot-ness possesses the same locus, pot 2, as the mutual absence of all the pots except pot 2. One can consider cases of pot 2, pot 4, etc., in a similar way. (See the figure below.) Thus a generic character has the same loci as the mutual absence of all its substrata; a generic character has at least two loci.



x = pot-ness, y_1 = pot 1, y_2 = pot 2, y_3 = pot 3

Still there would be overapplication to separateness, which has the same loci as the mutual absence of all its substrata, and also inheres in a single substance. (3) rules out separateness as well as existence.

This definition seems to have influenced that in the *Kaṇādarahasya* (*KR*), which reads: *ekamātravṛttivṛttitve sati pṛthaktvānyānekavṛttivṛttiguṇatvavyāpyajātimattvam*. (p. 67, 1.4.)

164–165 These two verses are quoted in *SDS* (p. 221, 1.6–9), and the way the number 'two' arises is explained in *SDS* as follows: "At first, there is the contact of a sense-organ with an object (1). Then arises the knowledge of the universal 'one-ness' (*ekatvasāmānya*) (2). Then arises the distinguishing perception (*apekṣābuddhi*) by which one apprehends 'this is one', 'this is one', and so on (3). Then arises the quality two (*dvitva*) (4). Then arises the knowledge of the universal 'two-ness' (*dvitvatva*) (5). Then arises the knowledge of the quality two (*dvitva*) (6). Then arises the cognition 'there are two substances' (7). (*SDS*, p. 221, 1.6–9: *tatra prathamam indriyārthasaṃnikarṣaḥ* (1). *tasmād ekatvasāmānyajñānam* (2). *tato 'pekṣābuddhiḥ* (3). *tato dvitvotpattiḥ* (4). *tato dvitvatvasāmānyajñānam* (5). *tasmād dvitvaguṇajñānam* (6). *tato dve dravye iti dhīḥ* (7).) Cf. Faddegon, p. 201.

166 Measure is the non-inherent cause of number. 'That which inheres in the non-inherent cause of number' refers to existence, quality-ness, or measure-ness. In order to rule out the first two, the author adds (2): 'but does not inhere in number'. The first two inhere in number.

167 According to *NMV* (p. 61, 1.19), (1) excludes the overapplication of the definition to number, measure, and aggregation (or special inner connection, *pracaya*). *PBh* (p. 131, 1.5.) says that impermanent large measure is caused by number, measure, and aggregation. Still it is possible to overapply the definition to color, taste, smell, etc., since their generic characters do not inhere in any non-inherent cause of measure. (2) rules out the possibility of color, etc. (cf. Note to Text 163, (2).). Because of (2), the thing to be defined can be neither a substance nor an action. Still the definition may overapply to conjunction and disjunction. (3) rules out these possibilities. Both disjunction and conjunction are non-inherent causes of sound. The definition says, '. . . is a locus of that which . . . '. Thus, distinction, inherence, or absence cannot be applied to any of these three. Neither of these three can be a locus. Therefore, the definition refers only to separateness.

168 (1) rules out existence (*sattā*) and all categories (*padārtha*) other than universal. (2) means a generic character which does not occur [lit. is not a locus of occurrence] in [a quality] which is not the counterpositive to [lit. which is not a locus of counterpositive-ness of] an absence-after-disappearance. This proviso rules out the generic characters of all qualities that may be permanent. Thus color-ness does occur in color, and the color that is found in the atoms of earth, water, and fire is permanent, so it can never be the counterpositive to the absence-after-disappearance of color. This proviso rules out a great deal because all the qualities except smell, disjunction, and conjunction occur in permanent substances. Smell is always impermanent (*NSM*, ad. 102: *sarvo 'pi gandho 'nitya eva*;). Disjunction and conjunction are also always impermanent, because they succeed one another. (3) rules out disjunction, for the non-inherent cause of the disjunction, e.g., of a pot, is the disjunction of its halves. (4) rules out smell. Smell-ness occurs in smell which does not occur in time. 'Time does not smell', i.e., has no smell. On the other hand, conjunction-ness does not occur in a quality that fails to occur in time, because it does occur in conjunction which does occur in time. For example, a man and time are connected by conjunction.

[169–170] The P edition has *sarvānyonyābhāvasamānādhikaraṇasamaveta* (*-vibhagāsamavāyisamavetatvarahita-*) *śabdāsamavāyisamavetavān saṃyogaḥ*, the part in parentheses being in small letters; the other part being in large letters. By presenting the definition in this way the text follows the directions of the commentator who states that the portion '*vibhāga* ... *rahita*' must be drawn from the previous definition (as Text 168, (3)). However, the footnote to this text states that P-1, P-2, and P-3 have the reading: *vibhāgāsamavetasarvānyonyābhāvasamānādhikaraṇasamavetaśabdāsamavāyisamavetavān* (p. 63). The V, M, and G editions also have the latter reading, on which my translation is based.

Text 169 and Text 170 have (1) and (2) in common. The difference between the two is that (3) in Text 169 reads 'does not inhere in disjunction', while (3) in Text 170 reads 'does not inhere in conjunction'. (2) rules out color-ness, smell-ness, etc., for 'to be the possessor of the same loci as the mutual absence of all [its substrata]' implies to reside in at least two loci (cf. Note to Text 163, (2)). It is possible for color, smell, etc., to reside only in one locus. Disjunction and conjunction are non-inherent causes of sound. (3) rules out disjunction. Therefore, the definition must refer to conjunction.

[173] Cf. *LM*, p. 24.

[178–180] Cf. *LM*, p. 31.

[181] The text is defining the non-inherent cause by saying that it must possess a certain universal, i.e., 'non-inherent-cause-ness'. Proviso (1) states that this universal must be the counterpositive (*pratiyogin*) of an absence which resides in farness and nearness. This is to say that the universal must never occur in farness and nearness. Thus (1) rules out farness and nearness. (2) rules out the generic characters of the special qualities of soul, and (3) rules out the generic character of substance-ness. Text 181 is, however, too wide for the definition of a non-inherent cause, and Udayana gives another definition, which is more accurate than this, in the next text.

[182] Between (1) and (2), the P edition has "[which] is different from a particular kind of taste, touch, viscidity, conjunction, and disjunction (*rasasparśasnehasaṃyogavibhāgaviśeṣavyatirikta*". (Of these four qualities, the first three when belonging to a final whole, cannot be non-inherent causes. Nor can the latter two when belonging to a substance which is about to be destroyed do.) This part, which is found only in the P edition, seems to be a later interpolation. It is most unlikely that Udayana enumerates particular qualities in defining a non-inherent cause. My translation is therefore based upon the variant (P-2) in the footnote of the P edition (p. 65), where the part starting with '*rasa*' and ending with '*vyatirikta*' is omitted.

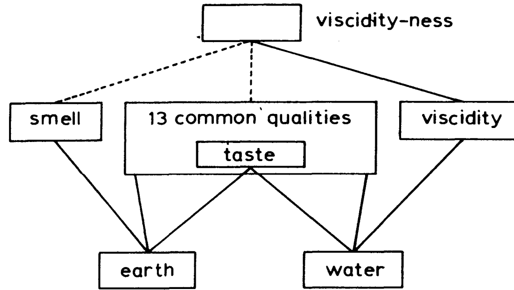
(1) rules out absence, which cannot be a non-inherent cause; (2), the special qualities of the soul, such as knowledge, desire, and hatred. (3) excludes the conjunction of the soul with the mind, which is an instrumental cause of the soul's special qualities. (4) rules out the measure of an atom, the measure of a diad, and the measure of space, because their measures are not instrumental causes of anything else. Universal, distinction, and inherence, which are not instrumental causes of anything else, are also excluded by (4). (5) rules out the color, the smell, the measure, etc., that belong to the final

whole. These qualities are instrumental causes of disappearance. When a pot is destroyed, its color is destroyed. And thus the color of the pot is the cause of the disappearance of color. Therefore, they are excluded.

184 (1) is concerned with the level of what is to be defined in the hierarchy of generic characters (cf. Part I, Chapter V, G, and H). Color-ness, taste-ness, smell-ness, and so on are all on the same level in the hierarchy of generic characters. Color-ness and yellow-ness, however, are not on the same level; color-ness is considered to be higher in the hierarchy than yellow-ness. 'To be directly pervaded (*sākṣādvyāpya*) by quality-ness' means to be one of color-ness, taste-ness, etc., not to be one of yellow-ness, sweet-ness, etc., and in this text, of course, it refers to viscidity-ness. (1) thus excludes all the categories other than quality.

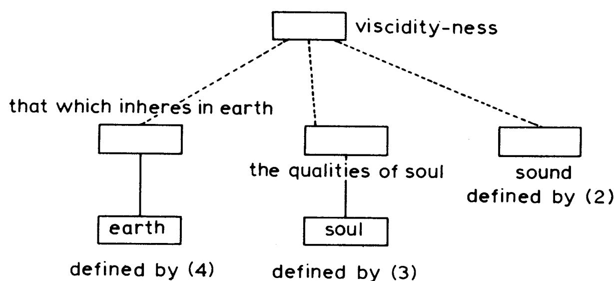
Taste resides in earth and water. Therefore, 'that which has the same locus as taste' refers to that which occurs in either earth or water, and which is not taste. (1) has already excluded that which is not a quality. Those qualities which are found in either earth or water are the following fourteen: color, taste, smell, number, measure, separateness, conjunction, disjunction, farness, nearness, heaviness, fluidity, viscidity, and inertia. These qualities except viscidity are qualities of earth, which are ruled out by (3), for (3) means that which is to be defined is not a quality of earth. Viscidity is the only remaining possibility.

One can illustrate the content of the definition as below. Smell and the thirteen common qualities including taste are the qualities of earth; viscidity and the thirteen qualities are those of water.

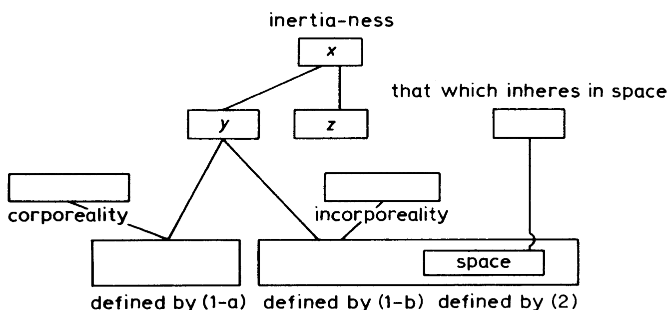


The P-1 and Bh editions define viscidity in a different way: viscidity is that which possesses the generic character that (1) is directly pervaded by quality-ness, (2) does not occur in sound, (3) does not occur in the qualities of soul, and (4) does not occur in that which occurs in earth (*pṛthivīvṛttivṛttitvarahitātmaguṇāvṛttiśabdāvṛttiguṇatvasākṣād-vyāpyajātimān snehaḥ.*).

(2) excludes sound; and (3) excludes the eight qualities of soul: knowledge, happiness, pain, desire, hatred, effort, virtue, and vice. (4) rules out the above-mentioned fourteen qualities of earth. Twenty-three qualities have been excluded, thus the only possibility left is that the generic character defined here is viscidity-ness.



[185] Here interia is defined in terms of conjunction, corporeality, incorporeality, space, and the *samaveta-samavetavat* relation. Below is a diagram illustrating the content of the definition.



Inertia is denoted by '*z*'; inertia-ness, by '*x*'. *y* is an explanatory form of *z*. The following table shows how the definition rules out all entities except inertia.

Entities	Ruled out by	Reasons
substance	(1)	What is to be defined has the loci in which corporeality or incorporeality can reside. Corporeality and incorporeality inhere only in substances. Therefore, what is to be defined cannot be a substance.
quality		
1. color	(1-b)	Not inherent in incorporeal substances.
2. taste	(1-b)	Not inherent in incorporeal substances.
3. smell	(1-b)	Not inherent in incorporeal substances.
4. touch	(1-b)	Not inherent in incorporeal substances.
5. number	(2)	Inherent in space.
6. measure	(2)	Inherent in space.

7. separateness	(2)	Inherent in space.
8. conjunction	(2)	Inherent in space.
9. disjunction	(2)	Inherent in space.
10. farness	(1-b)	Not inherent in incorporeal substances.
11. nearness	(1-b)	Not inherent in incorporeal substances.
12. heaviness	(1-b)	Not inherent in incorporeal substances.
13. fluidity	(1-b)	Not inherent in incorporeal substances.
14. viscidity	(1-b)	Not inherent in incorporeal substances.
15. sound	(2) or (1-a)	Not inherent in corporeal substances (only in space).
16. knowledge	(1-a)	Not inherent in corporeal substances (only in the soul).
17. happiness	(1-a)	Not inherent in corporeal substances.
18. pain	(1-a)	Not inherent in corporeal substances.
19. desire	(1-a)	Not inherent in corporeal substances.
20. hatred	(1-a)	Not inherent in corporeal substances.
21. effort	(1-a)	Not inherent in corporeal substances.
22. virtue	(1-a)	Not inherent in corporeal substances.
23. vice	(1-a)	Not inherent in corporeal substances.
24. inertia	This is what is defined.	
action	(1-b)	Not inherent in incorporeal substances.
universal	(2)	Inherent in the qualities of space.
distinction	(2)	Inherent in the qualities of space.
inherence		The definition says: ' . . . possesses that which inheres . . . '. Inherence cannot possess anything by inherence.
absence		Absence is ruled out for the same reason as inherence.

Inertia (*saṃskāra*) is of three sorts: speed (*vega*), mental impression (*bhāvanā*), and elasticity (*sthitisthāpaka*). The first and the third inhere in corporeal substances; the second, in incorporeal substances. Therefore, one can consider inertia in general to be inherent both in corporeal and incorporeal substances.

The point of this definition is that inertia is defined as the quality which inheres (1) both in corporeal and incorporeal substances but (2) not in space. Eighteen qualities do not reside in both corporeal and incorporeal substances. Hence, these qualities are ruled out first. The remaining six qualities, however, reside both in corporeal and incorporeal substances. Of these six qualities, five are of space. The definition says that what is to be defined is not a quality of space. Therefore, these five are ruled out, with the result that inertia alone remains.

186–188 Cf. *LM*, p. 31.

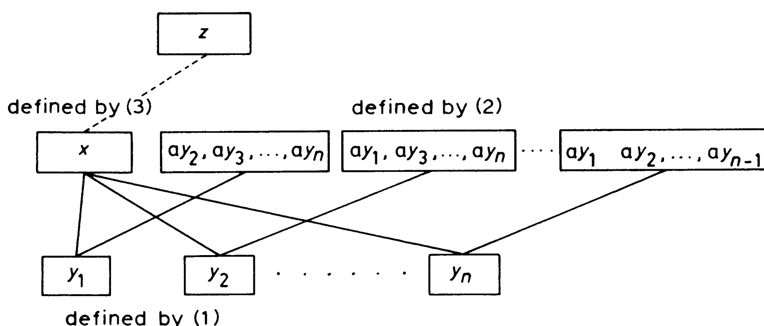
190 It is action-ness and existence that inhere in the non-inherent cause of conjunction. (2) rules out existence.

192 What is meant is disjunction of the lower surface of the thrown object from the place that it occupied and conjunction of the upper surface with the new place to be occupied.

200 *PBh*, p. 300, 1.13.

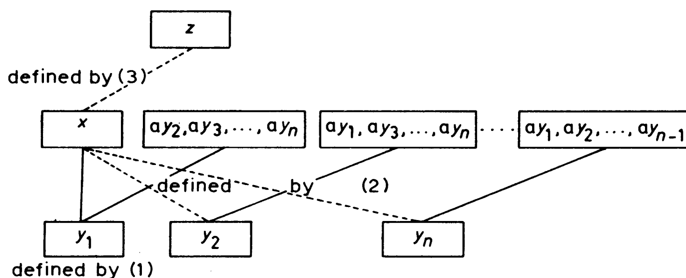
202 (1) rules out permanent substance, inherence, and absence. (2) excludes the possibility of distinction, which has only one substratum. (3) rules out substance, quality, and action. Thus, only the possibility of universal remains.

One can illustrate the content of the definition as follows:



ay_1 = the mutual absence of y_1, ay_2 = the mutual absence of y_2. In this figure, (1) means that x inheres in y; (2), that x has for its loci $y_1, y_2, \ldots, y_n$ ($n \geqq 2$); (3), that x does not have z inhering in itself. Cf. Note to Text 163, (2).

203 As in Text 198, (1) and (3) rule out substance, quality, action, inherence, and absence. (2) rules out universal, which inheres in at least two things. One can draw the following figure:



As in Note to Text 202, x is what is defined, i.e., distinction. y_1 is the locus of x. $y_1, y_2, \ldots, y_n$ are individual objects which are different from each other. z is that which does not inhere in x. ay_1 is the mutual absence of y_1; ay_2, the mutual absence

of y_2. In this figure, (1) means that x inheres in y_1. Distinction can inhere in its substratum. (2) means that x does not inhere in $y_2, y_3, \ldots, y_n$. No distinction can have more than two substrata. (3) means that x does not have x inhering in itself. Nothing can inhere in distinction.

The *Nyāyacandrikā* (*NC*) defines distinction almost in the same way as Text 203: 'Distinctions can inhere in only one substance and cannot have any universal'. (*NC*, p. 24: *nissāmānyavattve sati ekadravyamātrasamavetā viśeṣā ity*.)

204 Udayana's *LM* also defines inherences as permanent relation (*nityaprāpti*). Cf. *LM*, p. 25, 1.26. (A commentary on *LM* [Mithila Institute Series No. 13] understands the *prāpti* as *saṃbandha*, viz., relation.) *NC* and *TS* also define inherence as permanent relation. (*NC*, p. 24: *nityaḥ sambandhaḥ samavāyaḥ*; *TS*, p. 43: *nityasaṃbandhaḥ samavāyaḥ*.)

205 The concept *sarvānyonyābhāvasamānādhikaraṇabhāva* may be symbolized as follows: $A\ [x, y_1\ (B\ (y_1, ay_2) \cdot B\ (y_1, ay_3) \cdot \ldots . B\ (y_1, ay_n))] . A\ [x, y_2\ (B\ (y_2, ay_1) \cdot B\ (y_2, ay_3) \cdot \ldots . B\ (y_2, ay_n))] \cdot \ldots . A\ [x, y_n\ (B\ (y_n, ay_1) \cdot B\ (y_n, ay_2) \cdot \ldots . \cdot B\ (y_n, ay_{n-1}))]$. Cf. Note to Text 163.

206 Udayana was not the first one to mention absence as an independent category. Maticandra (A.D. 550–640) held absence to be an independent category in his *Daśapadārthī*. (H. Ui, *The Vaiśeṣika Philosophy* ['Chowkhamba Sanskrit Series', Vol. XXII; Varanasi, 1962], p. 101.) But it seems to have been after Udayana, who lived in the latter part of the eleventh century, that scholars generally accepted absence as an independent category. Śivāditya, who lived before the twelfth century, enumerated absence as an independent category in his *Saptapadārthī* (V. S. Ghate [ed.], *Śivāditya-viracitā Saptapadārthī*, Sec. ed. 1919).

208–209 Any absence before origination (*prāgabhāva*) has only one limit and that limit is in the future. There is no limit in the past because all *absences before origination* are beginningless (*anādi*). Similarly any *absence after disappearance* has only one limit and that is in the past. In the future an *absence after disappearance* will last for ever.

210 The present definition is the origin of the modern Nyāya definition: *anyonyābhāvatvaṃ tādatmyasambandhāvacchinnapratiyogitākabhāvatvam*. Udayana expresses the definition carelessly. His words could mean 'an absence of which the counterpositive is identity', e.g., *atādātmyam*. What he means, of course, is 'the absence of a pot's identity in a cloth or the absence of cloth's identity in a pot': *ghaṭānyonyābhāvaḥ paṭe, ghaṭe vā paṭānyonyābhāvaḥ*. In such cases identity really forms the relation by which the *pratiyogin* subsists; it is not the *pratiyogin* itself.

211 One needs at least two factors in order that a relation be possible. If one of the factors constituting the relation is absent, the relation itself will be impossible. Here, constant absence is considered to be the absence of the relation caused by the absence of a factor constituting the relation. For example, when there is no pot on the ground, there is the absence of the relation of conjunction between a pot and the ground.

Śeṣaśārṅgadhara interprets 'absence of relation' to mean that its counterpositive-

ness is delimited by relation (*saṃsargāvacchinnapratiyogitāka*), in order to avoid the overapplication to a mutual absence such as 'Cloth is not a relation', where relation is included as a counterpositive. *NMV*, p. 71. Cf. *SMV*, ad. v. 12.

In the *Bhāṣāpariccheda* (*BhP*), absence is firstly divided into two: mutual absence and absence of relation. Then, the latter is subdivied into three: absence before origination, absence after disappearance, and constant absence. (Cf. *BhP*, 12–13ab.)

(1) '*Tarka*', '*ambara*', and *aṅka*' mean respectively six, zero, and nine. It is the traditional way of giving a date in classical India that the number of the year is written from right to left. Therefore '*tarka-ambara-aṅka*' means the year 906 of the Śaka calendar, which is 78 years behind the Roman calendar. 78 A.D. is the year when the era of King Śālivāhana began following the extermination of the Śakas. Cf. Part I, Chapter III, A.

(2) Udayana's *Kiraṇāvalī* begins with this verse.

PART III

A TRANSLATION OF THE *KIRAṆĀVALĪ*

We have the following printed texts of the *Kiraṇāvalī*:

- B: *The aphorisms of the Vaiśeshika philosophy by Kaṇāda with the commentary of Praśastapāda, and the gloss of Udayanācārya*, ed. by Vindhyeśvarī Prasāda Dube ('Benares Sanskrit Series', work 9, Benares, 1897).
- G: *Praśastapādabhāṣyam with the Commentary Kiraṇāvalī of Udayanācārya*, ed. by Jitendra S. Jetly ('Gaekwad's Oriental Series', No. 154, Baroda, 1971).
- N: *Kiraṇāvalī*, ed. by M. S. Chandra Sarvvabhouma ('Bibliotheca Indica', Fasciculus I–III, 1911–1912), ed. by Narendra Chandra Vedantatirtha ('Bibliotheca Indica', Fasciculus IV, 1956).

I use B as the basic text of my translation. When I follow another edition, I indicate it in the notes. 'B43, 10', for example, means 'page 43, line 10 of the B edition'. For the sake of convenience, I have put numbers to the *Praśastapādabhāṣya* texts, which are those typed in capital letters. Usually Udayana in the *Kiraṇāvalī* does not cite the full text of the *Praśastapādabhāṣya*, but in this translation I translate the full *Praśastapādabhāṣya* text with which Udayana is dealing. The parts enclosed by [ ] have been supplied by me.

EARTH

B41,1 Substance is thus distinguished from other [categories] by substance-ness
G28,3 and the like, which we have discussed before,[1] not by properties residing in a
N185,3 part of [the category] substance, such as 'the property of possessing ultimate distinction' *(antyaviśeṣavattva)*, for the definition would then be too limited.[2] Neither are these [nine sorts of substance differentiated] from each other [by such properties], for the definition would then be too wise.[3] [These properties] do allow for a certain amount of differentiation, however. This is what [the author Praśastapāda] intends to say [in the preceding section of the *Praśastapādabhāṣya*]. But our task has not been hereby completed because there is still as undistinguished [an area] as there was before. What then should be distinguished from what? In reply to this question, the author
[1] [Praśastapāda] speaks [in the *Praśastapādabhāṣya*] as follows: HERE NOW WE PROCEED TO DESCRIBE THE DISCRIMINATION OF EACH SUBSTANCE INDIVIDUALLY. "Here" means 'in this chapter', and "now", 'now that we have come to the appropriate time [for this discussion]'. "Individually" *(ekaikaśas)* signifies, 'since frequency of instances has already been expressed by the compound formation *ekaikam*, the use of the suffix *-śas* is to express the high degree of frequency'.[4]

[2] [A THING IS] EARTH BY ITS RELATION TO EARTH-NESS. Earth-ness is an
B41,10 intermediate [or an including and excluding] unviersal *(sāmānyaviśeṣa)*.[5] Hence the relation intended by the author is inherence: by that [relation earth-ness is related to earth], and not by (1) the inherence [of x] in the same object [with y], nor (2) the inherence [of x] in that which is in conjunction [with y]. This is the meaning [of the passage].[6]

G29,1 . Objection: If the nature *(svarūpa)* of earth is known, what is the use of defining it? If it is known, proving it is senseless. If it is not known, there is nothing to be defined.[7]

Reply: No. Although the nature [of earth] is known, it still remains to be proved that this nature distinguishes it from other things. Thus:

N190,1 Earth differs from water, etc., (Hypothesis)
because of earth-ness. (Reason)
That which does not differ from other things [such as water] is not earth, like water. (Example)

It is not the case that this [substance] is not earth. (Application)
Therefore, [earth] differs from other things [such as water]. (Conclusion)[8]

Objection: Still your *pakṣa* lacks any qualifier [i.e., the factor differentiating earth from other things], for you do not know of a factor anywhere to differentiate it from all other things.[9] Or if you have determined this factor, there is no sense in proving it.[10]

B42,1 Reply: No, because we do know by perception of a factor differentiating the subject from other things, but only in [the limited area of] pots, etc. In the area that extends to everything covered by that which possesses earth-ness for its cause [i.e., the word 'earth'] from the ultimate atoms up to the whole globe of the world, we have not yet established, by any concomitance going beyond particular differentiais, a differentiation [from everything that is not earth]; and that differentiation remains to be proved. Hence there is no fault [in our syllogism].[11]

Question: Then, what *is* a defining character (*lakṣaṇa*)?

Answer: A defining character is a determinant[12] *hetu* for a negative concomitance (*kevalavyatireki*);[13] thus the teacher [Uddyotakara] has said, "The use of a defining character is to distinguish [what is to be defined] from [both] similar and dissimilar things".[14]

Objection: Well now, the same syllogistic fault reappears. The *pakṣa* will lack a qualifier, for you have established no qualifier, by any concomitance going beyond particular differentiations, to differentiate everything covered by the word 'earth' [from what is other than earth].

Reply: No, [there is no fault,] because what is to be proved is always a qualifier that accompanies the *pakṣa* but which has not heretofore been
B42,10 shown to be universally present there. For a known property accompanies its property-possessor. But such a property that is known as [invariably] accompanying the property-possessor is not to be proved, for if that were the case, the proof, as of something that is already known, would be useless.

Objection: But if a differentiation from other things is perceptible in the case of pots, etc., why do you not prove such differentiation in the case of the ultimate atoms by a positive concomitance through examples making use of pots, etc.? Why throw pots too into the *pakṣa* and turn your attention solely to a negative concomitance?

Reply: Enough of your friendly advice. All I have done is to construct a definition [for employment] in a negative concomitance.

Another function of a definition is to determine correct designations. Thus:
N196,1 People call[15] a substance of the kind under discussion 'earth', (Hypothesis)
because of earth-ness. (Reason)

B43,1 That which is not called 'earth' is not earth, like water. (Example)
It is not the case that this [substance] is not earth. (Application)
Therefore, it is called 'earth', (Conclusion)[16]

Here we do not make the mistake of not establishing the substratum [i.e., the *pakṣa*], because the existence of the object to which the word
G30,1 ['earth'] refers is known in its own nature. We do not have the fault that the *pakṣa* lacks a qualifier, because [even] uneducated people can understand the meaning of the term 'earth'.[17] As it remains to be proved that this expression is concomitant with a particular occasion [i.e., earth-ness] of the expression throughout the *pakṣa*, our proof is not senseless.[18] Furthermore, since we have thrown the whole of earth into the *pakṣa*, there can be no positive concomitance.[19]

Objection: If y holds positive and negative concomitances with respect to x [namely, where there is x, there is y; where there is not y, there is not x,] y has for its cause x, as, for example, a pot, etc., has for its cause clay, etc. Here the expression 'earth' holds positive and negative concomitances with respect to earth-ness. [Therefore, the expression 'earth' has for its cause earth-ness].

Reply: No, it is not so, because there is no positive concomitance when one is proving that the expression 'earth' possesses earth-ness for its occasion.
B43,10 The most you can say is that we have made a positive concomitance indirectly by using a pronoun, but this is merely a form of expression, that does not differ [essentially] from a negative concomitance, because there is no difference from what is intended.[20]

The statement of the [*Nyāya-*] *bhūṣaṇa*, "'Definition' (*lakṣaṇa*), 'sign' (*cihna*), and 'mark' (*liṅga*) are synonymous"[21] is not correct, because there is no room for [the inference] which possesses positive concomitance when a differentiation or an expression is being established, for the educated man will use the expressions naturally [i.e., without making any inference at all], whereas the uneducated man cannot discover a *sapakṣa*.

Question: Why does the *Śāstra* state among the definitions of substance that substance is that which possesses motion?[22]

Reply: The *Śāstra* means to show that this [property of possessing motion] is a special quality that is found only in substance, just like the property of being an inherent cause or that of possessing qualities. [it is] not intended to be the definition [of substance], because that would be too limited a definition when all substances are taken as the *pakṣa* and a differentiation [of substance from non-substance] is sought. Even if one includes only corporeal substances in the *pakṣa*, the property [of possessing motion] would be a uncommon (*asādhāraṇa*) mark, which is neither found in the *sapakṣa* nor

B44,1 in the *vipakṣa*]. Therefore, the intention [of mentioning the property of possessing motion] is as follows: When there is disagreement about whether or not air and mind are substances because of their invisibility, it is possible to prove them to be substances through their property of possessing motion. By this means we can circumvent the partial failure [of another definition, e.g., that which states substance is that which is visible].

Some might say that it is not definition [or a defining character] but the means of correct knowledge alone that establishes everything, for fear that one should be led to an infinite series [of definitions] each depending upon another. Such persons are acting after the fashion of the *brahman* who says, "I disapprove [of liquor] but I drink it". For, as the means of correct knowledge, they accept that which proves one thing or another and establishes one expression or another without any application which is too limited or too wide. This type of means of correct knowledge is nothing but definition.

Someone might say that [a definition] is a repetition [of what he already knows]. We reply: Yes, it is a repetition for us too. No supernatural knowledge is furnished by it.

And there need be no infinite regress of definitions because a limit can be set. Doctors, for example, do not use an infinite series [of definitions] in defining diseases; nor do grammarians and others in defining words. For among them too training is given only by means of definitions on the basis of usage of uneducated people.

G31,1 It has been said [in an earlier part of the *Praśastapādabhāṣya*] that earth, water, and soul are similar in that each of them has fourteen qualities.[23]
B44,10 In answer to the question, "what are the fourteen qualities in earth", the
[3] author says: [EARTH] POSSESSES COLOR, TASTE, SMELL, TOUCH, NUMBER, MEASURE, SEPARATENESS, CONJUNCTION, DISJUNCTION, FARNESS, NEARNESS, HEAVINESS, FLUIDITY, AND INERTIA.

Objection: Color and other [qualities] can also become special qualities [of earth] insofar as they are accompanied by smell. Why cannot [color and other qualities accompanied by smell] serve as a definition [of earth]?

Reply: No, that cannot be. Since smell is the only special quality [of earth], the qualifier would be redundant.[24] This will become clear as we go along.

N200,1 The author [Praśastapāda] expresses his agreement with the author of the
[4] Sūtra in regard to these [qualities]: AND THESE [FOURTEEN QUALITIES], SUCH AS COLOR, ARE ESTABLISHED TO BE THE VARIOUS QUALITIES [OF EARTH] IN CHAPTER [II OF THE *SŪTRA*], WHICH DEALS WITH THE DISTRIBUTION OF QUALITIES. The distribution of qualities takes the form of

inherence in substances. Chapter II [of the *Sūtra*] is called 'the chapter on the distribution of qualities' because it deals with such distribution. One can find in the *Sūtra* [a description of the distribution of qualities] as follows:
B45,1 "Earth possesses color, taste, smell, and touch".[25] The existence of color, etc., is thus established by their being listed in the *Sūtra*.

[5] The author expresses his agreement in regard to number etc.: FROM THE WORD 'VISIBLE' [IN THE *SŪTRA*] THE SEVEN [QUALITIES], SUCH AS NUMBER, [ARE ESTABLISHED TO EXIST]. According to the *Sūtra*, inherence in colored substances is given as the cause of the visibility of number, etc.: "Number, measure, separateness, conjunction, disjunction, farness, nearness, and action are visible because they are inherent in colored substances".[26] That which is not established [i.e., not existent] cannot be a cause. Therefore, the seven qualities that were in colored earth are established as existing.

[6] [The text says:] FROM THE WORD 'FALLING' [IN THE *SŪTRA*], HEAVINESS [IS ESTABLISHED AS EXISTING IN EARTH]. In the statement of the Sūtra, heaviness, is shown to be the cause of falling: "In the absence of conjunction, disjunction, effort, and speed, falling occurs on account of heaviness".[27] Heaviness is thus established as existing in earth which falls: [established as existing] because that which is not established [i.e., not existent] cannot be a cause, and [established as existing in earth] because that which is in x cannot be a non-inherent cause of motion in y, for we observe the opposite in the case of *nodana*, etc.[28]

[7] [The text says:] FROM THE WORDS 'COMMON TO WATER' [IN THE
B45,10 *SŪTRA*], FLUIDITY [IS ESTABLISHED AS EXISTING IN EARTH]. In the statement of the *Sūtra*, it is said that butter and the like which are made of earth
G32,1 share with water a common property, i.e., fluidity: "When butter, lac, and the bees' wax, which are made of earth, are heated, they become similar to water insofar as they become fluid".[29] Thus the existence of fluidity is established [in earth].

[8] [The text says:] FROM THE WORDS 'SUCCESSIVE MOTION', INERTIA [IS ESTABLISHED AS EXISTING IN EARTH]. The Sūtra says, "The initial motion of an arrow is due to impulse. The succeeding [motion] is due to the inertia produced by the [initial] motion. All successive motions are
B46,1 [produced] in a similar way."[30] This information concerning the motion of an arrow shows that inertia is the cause of the successive motions of an earth substance. Thus inertia is established as existing [in earth]. The same passage of the *Sūtra* implies another point: One should understand that [inertia] is also stated to be the result of the initial motion.

By the foregoing, which is the author's guise of showing his agreement

with the author of the *Sūtra*, he has suggested the means of knowing each [quality of earth] as follows: perception [may serve as the means for knowing] the eleven qualities beginning with color; the means of cognizing earth's liquidity is a perception combined with a justifying argument in the form: "Since this [fluidity] here [in butter] is always accompanied by a contact with fire, being absent when that is absent, it is not like [the fluidity of] milk, etc. It must exist by inhering in that [butter] with which my sense-organ is in contact and does not belong to something else [viz., water]."[31] In order to eliminate the false objection of stupid Mīmāṃsakas that the mere continuum of uninterrupted motions is the cause of the expression 'speed', it is shown that the means for ascertaining the existence of inertia is an inference in which the effect [viz., motion] serves as the mark.

B46,10 Having thus established substance-ness through the property of possessing qualities, the author takes up and points out particular qualities that are
[9] causes of our setting up [the subcategory] earth. [The text says:] SMELL IS FOUND ONLY IN EARTH. Smell occurs in earth only, not in any other substance. This is as much as to say that the inherence of smell is the cause of our setting up the category earth. Water [seems to] smell good or a breeze
B47,1 [to] be fragrant because they are perfumed by flowers and the like, which are made of earth. One must note that this [fragrance] is concomitant with that [earth-substance] and is not natural [in water or air].

Objection: Smell does not pervade the whole of earth, because it is not found in jewels, diamonds, etc., which are to be spoken of later. Therefore, how can smell be the cause of our setting up [the subcategory earth]?

Reply: No, [smell does not fail to pervade the whole of earth]. If the original color [of an earth substance] disappears and another color appears on account of 'cooking', the [latter] color produced by 'cooking' is always accompanied by smell. Therefore, in that also which possesses the original color we may infer the existence of smell. If we do not perceive it, this is simply because it is not manifested there, just as it is not manifested in the olfactory organ.[32] This is the intention of the author.

[10] [The text says:] THERE ARE VARIOUS COLORS, SUCH AS WHITE. To this
G33,1 passage one ought to supply the words 'in earth only'. [How is it possible for earth to possess various colors?] [Earth] cannot have colors, such as white, through 'accumulation' (*samuccaya*) because (1) the accumulation of generic characters [such as whiteness and yellowness, in one color] is impossible because they are contradictory; [i.e., there is no color that is characterized by both whiteness and yellowness] and because (2) the accumulation of individual [colors in one substance] is also impossible. [If it were possible,]

it would occur either (a) throughout the locus, or (b) through only a part of the locus. But the first case is impossible, because we have never seen such a case. [Nothing is observed to be both thoroughly white and thoroughly
B47,10 yellow.] The second case is also impossible, because it is contradicted by
N205,1 the fact that a color occurs throughout its loci.[33] Then what is a variegated color?[34] [We would reply:] Just as the color white is characterized by the generic character white-ness, so the color 'variegated' is characterized by the generic character 'variegated-ness', and this color occurs throughout its locus. Now these colors taken separately are not [sufficient] cause to establish [the subcategory] earth, because no one color extends throughout [all earth substances].

However, an accumulation in the form of the successive inherence of many colors, such as white, is found only in earth. Furthermore, color possessing an indefinite number of such subordinate generic characters as white-ness, 'whiter-ness', and 'whitest-ness', is found only in earth, nowhere else. Although water possesses white-ness, it does not possess such gradation (*tāratamya*) of subordinate universals, although it seems to possess such gradation through its conjunction with earth substances. Similarly, [the color of] fire has only one basic characteristic, viz., white-and-shining. Hence, there are no variations [of color in water and fire].

Now some people say: There is no such universal as white-ness, and even less a gradation of subordinate universals [e.g., white-ness, etc.]. Each individual color, such as white or red, although permanent, is manifested by impermanent individual substances. The gradation of these [colors] is due to the mixture of their loci. As one keeps adding black substances to a white
B48,1 one, a gradation [in color] appears.

Reply: That is not correct; for them even when the locus is static, there could be no cessation of a former color and origination of a new color by the application of fire. Furthermore, that which inheres in many individual things which admits of no gradation, and which is permanent, cannot be other than a universal.

Objection: Then let the color white[35] and other colors be universals.

Reply: That cannot be. If that were the case, there would be a mixture of generic characters (*jātisaṃkara*), because the color white cannot be fitted into a hierarchy with such generic characters as cow-ness.[36]

[11] [The text says:] THE TASTE [OF EARTH] IS OF SIX SORTS: SWEET AND THE OTHERS. Taste too always occurs in jewels and such like, because, just as in the case of smell, we can infer its existence through the color produced by 'cooking'. The textual passage means that, [just as in the case of smell], only

N210,1 in earth does taste possess many subordinate universals, for the natural taste
of water is unmanifested sweetness alone. Subordinate varieties [of taste]
B48,10 found in water substances, such as coconuts, are due to the presence of earth
substances. The definition [of earth] is, therefore, to be understood as follows: Earth possesses smell, color, and taste, the latter two possessing many subordinate universals.

Objection: What you have said may be true. But just as those three substances [i.e., earth, water, and fire] are alike in having color, while earth alone has various colors, water has only white color, and fire, white and shining color, in the same way, we can differentiate one substance from another by referring to the subordinate varieties of smell.

[12] Reply: [The text says:] There are two sorts of smell: GOOD AND BAD.
G34,1 One should supply "in earth only", that is, 'not in other substances'. As smell
of different sorts occurs in one and the same substance at different times due to 'cooking', it cannot serve to establish the existence of one substance or another.

The author implies that the touch which results from 'cooking' cannot be
[13] used to define earth: THE TOUCH [OF EARTH], BEING NOT-HOT NOT-COLD,
RESULTS FROM 'COOKING'. Although air is stated to have a not-hot not-cold touch, [this touch] does not result from 'cooking'. Earth possesses the touch that results from 'cooking'. This is the meaning of the definition [of the touch of earth]. If [earth] were defined as that which possesses touch, the definition could overapply to water, etc. If [earth] were defined as a possessor
B49,1 of that which results from 'cooking', the definition would overapply to fire
[substances] that have become fluid through 'cooking'.[37] Therefore, [earth] is that which possesses touch resulting from 'cooking'. Although it is true that the smell, color, and taste [of earth] results from 'cooking', this fact has not been stated explicitly here [in that textual passage], as it is obvious. However, there is disagreement about whether or not the touch [of earth] also results from 'cooking', for the touch [of earth] is peculiar. Unlike the smell, etc., [of earth], it is not always accompanied by 'cooking' and absent when 'cooking' is absent. If one supposes that [the touch of earth results from 'cooking'] simply because it is a quality of earth, he will be forced to assume that measure, which is a quality of earth, also results from 'cooking'. Thus, eliminating the seed of that disagreement, the author states explicitly that the touch [of earth] results from 'cooking'.

If [the touch of earth] did not result from 'cooking', it would be unqualified (*aviśiṣṭa*, i.e., the same in all instances), just as number, measure etc., are, and likewise there would be no particular pain when one touches the fangs

[or the stinger, etc.,] of a snake, a scorpion, a venomous insect, etc., or [the sharp edges of] a *śūkasimbi* (cowach), a *vṛścikapattrikā* (nettle), etc..
B49,10 Moreover, the pain would not disappear even when one touched particular things such as magic gems and healing roots. There would be neither the injunction to touch cows, etc., nor the prohibition against touching outcasts, etc.. These two [i.e., the injunction and the prohibition], cannot be set up for mere substances [but rather for some special property that has developed
N215,1 in the substances]. There would also be no differences in the atonements for the sight, touch, smell, taste, etc., of outcastes, liquor, and other [illicit objects].

Therefore, one should hold that the touch of earth also results from 'cooking', (Thesis)
because it is a special quality of earth, (Reason)
like smell. (Example)

Objection: Some people hold that there is no touch in earth, because [such a doctrine is] rejected by the fact that one cannot perceive any other touch except those of the hotness [of fire] and the coldness [of water]. When coldness is superseded by the touch of fire and when hotness is superseded by the touch of water, one experiences a not-hot not-cold [touch].

Reply: To such persons the author says: [THE TOUCH OF EARTH] BEING NOT-HOT NOT-COLD. 'Being superseded' (*abhibhava*) means a lack of perception, this lack being caused by the perception of something homogeneous that is stronger, and accordingly, it is the stronger of two entities that is necessarily perceived. But such is not the case in the matter that we are
B50,1 speaking of, where one perceives a third sort of touch without perceiving either hot or cold. Thus in the darkness [where there can be no fire], one may perceive [this sort of touch] in a dry substance [where there can be no water]. This is the author's meaning.

G35,4 If earth were exclusively impermanent, there would be an infinite series of parts. If any part of some [final whole] were completely destroyed, a product [which requires that part but lacks it] would lack its substratum.[38] If earth were exclusively permanent, there would be no means for knowing it, and even products possessing smell would have to be substances other
[14] [than earth].[39] Anticipating these arguments, the author says: EARTH IS OF TWO SORTS: PERMANENT AND IMPERMANENT (*NITYAṂ CA ANITYAṂ CA*). The two particles 'ca', which mean 'and', are used to imply a complementary relationship [between the group of permanent things and that of impermanent things] and to exclude the possibility of earth's being exclusively one or the other [namely, either only permanent or only impermanent]. Therefore, the

above-mentioned difficulties would not be possible. This is the intention of the author.

Question: Then, what [sort of earth] is permanent, for the world (*mahī*) is large. Simply because it is large, it is a product and accordingly impermanent.
B50,10 On the other hand, that which has the size of an atom is not perceived.

[15] Reply: [The text says:] EARTH IN THE FORM OF AN ATOM IS PERMANENT, where 'form' (*lakṣaṇa*) means nature (*svabhāva*). Here [in the case of earth] it will be the products that serve as the means for knowing [the existence of permanent earth].[40] Because this is his intention, the author here indicates no other means for knowing it. As we continue dividing a large substance, such as a lump of clay, by a process in which motions occurring within its parts lead to disjunction [of the parts], etc., we obtain an ever
B51,1 smaller entity; then, that entity which cannot be divided into anything smaller we call an atom because of the requirement that a whole have parts. If Mount Meru, a mustard seed, and the like were composed of an equally infinite number of parts, there would be no difference in size between them.[41] One cannot say that they can be different on account of a difference in the
N220,1 way the causes are grouped or in the causes' size, for a difference in either [the grouping or the size of the causes] is impossible in the absence of a difference in number.

The requirement [that a whole have parts] cannot continue to complete dissolution [i.e., at a point where there remains something so small that it is nothing]; such complete dissolution cannot occur since a certain final [part] is without parts.[42] There can be no destruction of a substance without either the disjunction or the destruction of its parts. The requirement [that a whole have parts] cannot continue beyond the disjunction. [In other words, this implication continues as long as there is disjunction.] Since disjunction possesses that which can be disjoined for its substratum, disjunction is impossible in the absence of a substratum. It is not reasonable to say that disjunction possesses only one substratum. Something is disjoined from something else, but a thing cannot be disjoined from itself. Therefore, we can see that this requirement that a whole have parts ends with [i.e., does not apply to] that which possesses no part.

G36,1 It might be objected: 'That is only conjectured, not proved'; that is, someone might say: 'What is the use of seeking [another] means for our knowing a triad, when its existence is known by means of direct perception, and when it can have no parts because there is no means for supposing that it has parts?' The objection is worng, for since a triad is a visible substance, it must have largeness and possess a plurality of substances [i.e., atoms]. If a substance

could be visible without largeness, its visibility would not be in ratio to its size as it is placed farther and farther away.[43] And if its visibility did not accompany the property of possessing many substances, it would not accompany largeness, for in the absence of the former there is the absence of the latter, the former being the cause of the latter. Otherwise, the degree of largeness [of a substance] would not be in accord with the number of the atoms of which the substance consists. Therefore,

a triad of the type under discussion is large and possesses many substances [i.e., atoms], (Thesis)
because it is a substance visible to us and others, (Reason)
just like a pot, etc.. (Example)

Another [philosopher has tried to prove the existence of the atom in a different way. He] has said: "The gradation in atomic size must terminate somewhere because it is a gradation of size like the gradation of largeness
N225,1 [and the point where it terminates is the atom]".[44] This is wrong because it suffers from circular reasoning.[45]

If this [visible object] is not the ultimate atom, then let us suppose that
B52,10 its parts, which we infer from their result, are ultimate atoms, for they have no largeness. This is because a large [substance], having a particular form, would be visible, and because one cannot infer that they have parts since one can imagine no proof of their being effects. Granted that because of their atomicity and partlessness they must lack the largeness and aggregation that cause largeness of size [in visible products], still their number is a plurality, so all is well.[46]

Reply: No, that is wrong. We have already given our answer. Surely parts of a triad must themselves contain more than one substance, because it [i.e., a triad] is large, and because the property of consisting of many substances (*anekadravyatva*) which belongs to its parts is a cause of the largeness of a product. Otherwise, largeness would not be in ratio with the increase of this property [of being composed of many substances]. [In other words, the more diads a thing is composed of, the larger it is.] Therefore,

(1) the parts of a triad have their parts,
because they can produce large substances,
like threads.

(2) These [parts of a triad] are many,
because they produce a large [substance], although they cannot have measure and aggregation,
just as a large number of threads makes a larger cloth although the threads are of the same measure and aggregation.[47]

B53,1 (3) They [i.e., parts of a triad] are separated,
because they have parts,
like a pot.

Objections [against these three syllogisms] have already been refuted. There is no room for supposing 'parts of a part of them' [i.e., parts of a part of a diad], because there is no means for our knowing such entities and because they are ruled out by the fact that there is no argument favorable to such an entity's possessing corporeality, the property of producing composite substances, etc. [Finally, if parts of a part of a part of a triad were corporeal and able to produce substances, etc.], there would clearly be an unfavorable infinite regress. We have thus ascertained the existence of the atom.

G37,1 Thus, since we have proved that the proposition 'that which is a product has parts' is reversible [i.e., 'that which is not a product lacks parts' is also true],[48] we may begin by showing something [i.e., a triad] to possess parts because of its being a product and go on until the property of being a product ceases with a [final] part. We may then show that this part is partless and is
[16] the ultimate atom. With this in mind the author says: BUT IMPERMANENT EARTH TAKES THE FORM OF A PRODUCT. The word 'but' is employed here to distinguish an atom [from aggregates of atoms].

[17] What is the means for our knowing products? The author answers: IT [i.e., IMPERMANENT EARTH] IS QUALIFIED BY HARDNESS, ETC., AND BY THE
B53,10 CONFIGURATION OF PARTS, meaning that earth of this sort is known by perception. [The word] 'hardness' is as much as to say stability, in other words, an earth substance's nature of maintaining its configuration for a long time. 'Etc.' refers to the ability to support or obstruct the form of water [substances] and the like. 'The configuration of parts' means a kind of configuration that manifests such and such subordinate universals.[49] They [i.e., products made of earth] are qualified by both hardness, etc., and the configuration of parts. This cannot happen with another substance, for water, etc., may be reconfigured by any onset of another substance that has touch and speed. Unlike an earth substance, water does not support another
B54,1 substance by attaching itself, nor does it obstruct its form. Unlike an earth substance, a non-earth substance does not possess differences of configuration which manifest one or another generic character. Since earth has various
[18] forms, [the author says:] IT [i.e., IMPERMANENT EARTH] BELONGS TO MANY LOWER GENERIC CHARACTERS.

Question: Everything except a sentient being serves other things. What use to a sentient being can one prove earth has?

[19] Reply: IT SERVES IN MANY WAYS, [TO MAKE] BEDS, CHAIRS, ETC.

By 'etc.' is meant housebuilding,[50] plowing, etc. Again, by 'etc', we imply
implements of striking, etc.

[One might ask:] 'Then is it only in the form of an object that earth serves
other things?' The answer is: 'No.' The author says that earth serves other
[20] things in three ways. Hence the text says: IT, HOWEVER (*CA*), IS OF THREE
SORTS, AS IT BEARS THE NAMES 'BODY', 'SENSE-ORGAN', AND 'OBJECT'. THE
N230,1 COMPOUND *ŚARĪRENDRIYAVIṢAYASAṂJÑIKAM* IS POSSESSIVE [showing
that earth-products possess these names. As the author speaks of names, not
generic characters], it follows that the state of being a body (*śarīratva*), the
B54,10 state of being a sense-organ (*indriyatva*), and the state of being an object
(*viṣayatva*) are not generic characters. This is because the first two cannot
be either superior or inferior 'classes' to earth-ness,[51] while in the third, a
universal and an absence, which possess no universal, are also 'objects'.[52]
Therefore, when there is enjoyment in a soul qualified by a final whole, that
final whole is called its 'body'.[53] The sense-organ causes perceptual cognition
when connected with a body, and is itself not perceivable by the sense-
G38,1 organ.[54] The object is the means of enjoyment through being perceived.[55]
B55,1 These [three] names are thus concerned with the imposed properties (*upādhi*)
which are in the form of [these three] definitions. The particle 'ca', having
the meaning of '*tu*' (however), has the function of distinguishing [earth] from
air, etc. The products of air are of four sorts, whereas the prodcuts of space
and other [substances] are of one.

Implying that earth [atoms] alone can constitute bodies possessing many
intermediate forms, and that the other substances cannot, [the author] shows
[21] this difference: BODY IS OF TWO SORTS: BORN FROM SEXUAL UNION
(*YONI*) AND NOT BORN FROM SEXUAL UNION.

Someone might say that we do not perceive bodies that are not born from
sexual union, whereas we do see bodies that are born from sexual union. To
[22] him the author says: OF THESE, [THAT VARIETY OF BODY WHICH IS] NOT
BORN FROM SEXUAL UNION, AND WHICH IS INDEPENDENT OF SEMEN AND
BLOOD, IS THE BODY OF GODS OR SAGES. In fact we have heard that,
among gods and sages, Manu and others were born from Brahman's mind.

N235,1 Objection: If an effect occurred independently of its cause, then it would
not be an effect. Even without clay, etc., there would be a pot, etc. [There-
fore, it is not correct to say that the gods or sages can have bodies even
without the union of semen and blood.][56]

B55,10 Reply: No, that is not so, for [the domain of] being a body deviates
[From the domain of being a body born from sexual union] because of [the
bodies of] worms, mosquitoes, etc., which are born from hot air [not from

sexual union],[57] and because it is not proved that [bodies] must have [one] special configuration.

The gods are in the third stage[58] [i.e., always young], live through many reigns of Manu, do not blink their eyes, can walk in the sky and go everywhere at their pleasure. They include the three-eyed one [i.e., Śiva], the four-armed one [i.e., Viṣṇu], and others. We [humans] are, however, in the tenth stage[59] [i.e., dying], live at most for a hundred years, blink our eyes, walk on the earth. We are unable to go everywhere we please, and we have two eyes and two arms. Even though we can find a certain degree of similarity in the configuration of parts, the gods are different from us; this is obvious since one can see differences of generic characters, as in the case of a cow and a gayal [i.e., an animal similar to a cow].

B56,1 Even a [particular] configuration is not invariable to sexual birth, for humans, cattle, elephants, and snakes are born from sexual union without [having one configuration]. Therefore, the enjoyment of all [living beings] depends upon their own deeds. They [i.e., deeds,] set our birth and span of
G39,1 life by furnishing it [i.e., by furnishing our allotted enjoyment]. By a deed through which [a living being] must be made to experience pain, such as living in the womb, he is caused to be born from sexual union. By other [deeds], however, the situation is different; [that is to say, the living being will not born from sexual union]. We think [that is] reasonable. The author
[23] says the same by stating: [THE BODY OF GODS OR SAGES] IS BORN FROM ATOMS ACCOMPANIED BY SUPERIOR MERITS (*DHARMA VIŚEṢA*). He indicates the main cause by the word 'atoms'. But no body is produced by ultimate atoms coming together. He will make this fact clear [with the passage,] "by the process of a diad, etc."[60]

[24] [The text says:] MISERABLE CREATURES POSSESSING BODIES SUITED TO [SUFFER] TORTURE ARE BORN FROM ATOMS ACCOMPANIED BY STRONG VICES (*ADHARMA VIŚEṢA*). MISERABLE CREATURES, such as mosquitoes, POSSESS BODIES SUITED TO [SUFFER] TORTURE. 'Torture' means the pain
B56,10 in hell. Such pain is endured by [those] bodies, that is, bodies of those who suffer hell. [The genitive relation between the two terms of the expression], 'miserable creatures' and 'bodies' (*kṣudrajantūnām* [genitive] + *śarīrāṇi* [nominative]), indicates a difference between the configuration of parts [of these creatures] and the possessor of that configuration of parts, or a difference between the abode of enjoyment and the enjoyer. '*Adharmaviśeṣa*' means strong (*prakṛṣṭa*) vices (*adharma*). [The bodies of miserable creatures are composed] of [atoms] accompanied by them [i.e., strong vices].

Bodies born from sexual union are not able to endure the pain of torture,

such as being cooked in an iron pot, or being cut by a saw until the end of the world. Not even passing reference to the happiness of touching the female
B57,1 sexual organ is heard of among the tortures in hell. It is not true that there are no hells, because that would imply our having no belief in heaven. [Scripture is evidence for both.]

Replying to the objection that, if the expression 'sexual union' indicates the cause in general, two kinds [of bodies] would be impossible, the author
[25] says: [THAT VARIETY OF BODY WHICH IS] BORN FROM SEXUAL UNION IS BORN FROM THE MIXTURE OF SEMEN AND BLOOD. IT CAN BE OF TWO KINDS: BORN FROM THE WOMB AND BORN FROM THE EGG. 'Mixture' means mutual meeting, and 'born from it' means to be born from sexual union.

[26] [The text says:] HUMAN BEINGS, CATTLE, AND WILD ANIMALS HAVE BODIES BORN FROM THE WOMB; 'WING-POSSESSING ONES' and 'THOSE CREATURES THAT BY NATURE MOVE WITHOUT LEGS' HAVE BODIES BORN FROM THE EGG. 'Cattle' means those animals which are kept in villages; 'wild animals', those which are found in woods. 'Womb' means the cavity of skin enclosing the embryo. 'Wing-possessing ones' means birds, 'those creatures that by nature move without legs' means snakes, worms, fish, etc.

It might be proper to mention trees here [as entities taking the form of bodies] because they have various bodies, although they break forth from the earth. Nonetheless, the author's immediate intention (*vivakṣā*) is not to consider trees as beings which experience happiness and pain, because their consciousness is small in comparison with that of people. His intention is rather to consider trees as objects, insofar as they are generally helpful to and dependent upon creatures that move. Therefore, trees will be included in [the
B57,10 group of] objects and will be explained in the appropriate section.

When his immediate intention is of one sort he may mention an entity separately even though it is contained [in another group].[61] For example, although knowledge [communicated] in a dream (*svapnajñāna*) and knowledge [communicated] in a doubt (*saṃśayajñāna*) belong to [the group of] misconception (*viparyaya*) insofar as they are not in accordance with reality, our author [treats these two kinds of false knowledge separately from misconception], following the common opinion of the world.[62]

When his intention is of another sort, he may analyze separate entities under a single heading. For example, remembrance (*smṛti*) is included in correct knowledge insofar as it is true, although remembrance actually belongs to false knowledge insofar as it is not knowledge obtained by the means of correct knowledge.

When his intention is of still another sort, he may state one characteristic

[of an entity] while not mentioning another, even if the latter is present.
Here [in the case of earth], for example, not mentioning that the color, taste,
and smell [of earth] are produced by 'cooking', the author mentions that its
smell is good and bad. Paying no attention to the fact that bodies and sense-
organs are produced by the process of a diad, etc., he mentions that they are
born from sexual union. This is the way our author writes.

Question: How could they [i.e., trees] be [considered bodies]?
B58,1 Answer: It is thus: trees and the like are superintended by separate 'en-
joyers' [i.e., souls],[63] (Thesis)
G40,1 because they possess life, death, sleeping, waking, sickness, cure, seeds, the
propagation of their own kind, the inclination to approach agreeable things
and to move away from disagreeable things, and so on, (Reason)
N242,1 as in the case of well-attested bodies, like ours. (Example)

These [characteristics, such as life, death, sleeping], are not doubtful
[marks in the above-mentioned syllogism], because they are associated with
individual breath.[64] That [breath] exists, since trees draw up water sprinkled
at their roots, and draw up the earth elements for which they yearn. This is
the case, for trees grow and [their parts which have been] broken or injured
heal. Otherwise [that is to say, if trees did not draw up water, etc.], all
[trees] would wither and die according to the rule that effect and growth do
not occur without cause. This is a brief answer. Many canonical authorities
concerning the matter could also be cited.[65]

Question: How is it that bodies of human and other beings are made of
earth? It is well-known that they have five elements [i.e., earth, water, fire,
N245,1 air, and space] because they smell; are moist, are 'cooked', move, and give
way [to entering objects].

B59,1 Answer: This is true, insofar as these five [elements] are general causes [of
the body]; but they are not inherent causes. If you ask why not, the author
will state that [all effects] are built up by the process of diad, etc.[66] If in this
[process] one [diad] were produced by two heterogeneous atoms, it would
be without smell and without color, for one [atom] cannot bring smell, etc.,
into effect. If [a single atom] could bring [such qualities] into effect, it
would follow that it must always bring them into effect, as its doing so would
depend on nothing else.

Objection: Why would not the same implication follow if you require
more than one atom [to produce these qualities]? You might reply, 'Because
then the bringing into effect of the quality depends on the forming of an
inherent cause,[67] for nothing is brought into effect without an inherent cause
being required'. We, however, would point out that the same condition obtains

if we allow a single atom to effect the quality [i.e., it cannot effect it until it combines with a second atom so that a diad may be formed to furnish an inherent cause for the quality]. Nor should you argue that, since we see the many colors of individual threads bringing into effect [the color of a cloth],
B59,10 the same principle should be applied elsewhere. For in that case it is possible for the causes to be homogeneous. Where qualities are brought into effect by heterogeneous causes, the matter will be different. For there is no argument to disprove our objection. It is thus that water can be hot [viz., by being built up of diads consisting of a water atom and a fire atom] and air can be fragrant [being built of diads composed of an air atom and an earth atom].

Reply: No, if the quality [of a diad] were brought into effect by one quality [residing in an aggregate of two different kinds of atoms], there would be a mixture of generic characters. For example, [such] a diad would be characterized by the generic character earth-ness simply because it possesses smell, and it would also be water because it would be cold and naturally fluid.[68] Similarly, a diad would be fire because it is hot and possesses a
G41,1 shining white color; it would be air because it possesses a not-hot not-cold touch which is not caused by 'cooking'.

Now it remains to set forth the means for knowing the validity of the arguments above:

(1) Diads possessing smell are produced only by atoms possessing smell, (Thesis)
because the former, being products, possess smell, (Reason)
as in the case of a diad produced by two earth atoms. (Example)

(2) Atoms of the type under discussion produce only diads possessing smell, (Hypothesis)
because those atoms possess smell. (Reason)
Those [atoms] which produce [diads] lacking smell do not possess smell, like atoms which produce water and the like, which lack smell. (Example)
N250,1 It is not the case that these [atoms] do not possess smell. (Application)
Therefore, they produce only diads possessing smell. (Conclusion)

One should not say that the examples [given in the first syllogism] are not established, for, even if there were no rule concerning the bringing into effect [by either homogeneous or heterogeneous elements], one must still admit
B60,1 that they could be brought into effect by two homogeneous atoms as well [as in other ways]. Otherwise it would follow that one would never perceive smell-less water, etc., tasteless fire, etc., and colorless air.[69] Thus,

(1) diads possessing natural fluidity are produced only by atoms of that same sort [i.e. possessing natural fluidity], (Thesis)

because they, being products, possess natural fluidity, (Reason)
as in the case of a diad produced by two water atoms. (Example)
(2) Water atoms produce only cold diads, (Thesis)
because water atoms are cold. (Reason)
Those [atoms] which produce not-cold [diads] are not cold, like [atoms] which can produce fire diads that are not cold. (Example)
In this way, the reader may supply the rest. Therefore, we conclude that only homogeneous [atoms] are effective, and that heterogeneous [atoms] are not.

Yet how can one ascertain the fact that bodies are made of earth?[70] [One
B60,10 can do it] as follows: Even when wetness, etc., has been removed [from a body], it is still possible to recognize it as a body. Furthermore, smell continues to reside in it as long as its substance lasts, as in a pot. In a pot, etc., made of earth, smell exists whether the pot is wet or dry, but coldness, etc., ceases to exist, just like the smell of water and other [substances] perfumed by flowers, etc.[71] One can observe the same thing in the case of bodies. Thus one should hold that [bodies] are made of earth.

[27] The author explains the sense-organ as follows: [EARTH IN THE FORM OF] SENSE-ORGAN IS THE OLFACTORY ORGAN WHICH MANIFESTS SMELL. THIS ORGAN BELONGS TO ALL LIVING BEINGS AND IS PRODUCED BY PARTICLES OF EARTH WHICH ARE NOT SUPERSEDED BY WATER, ETC. The sense-organ which manifests smell is made of earth and it is called 'the olfac-
B61,1 tory organ', for [this organ] manifests only smell and not color, etc. This is the meaning [of the textual passage].

G42,1 This [organ] is proved to be only an instrument by its perceiving of smell, for it is a rule that an action [such as perceiving] must be effected by some instrument.[72] It [i.e., the olfactory organ] functions by coming into direct contact [with its objects],[73] because while it produces [the perception of smell], it does not produce [a perception] if it has not reached [its object]. [The olfactory organ] is a substance, because it is the locus of a contact [or conjunction].
It is made of earth, (Thesis)
because it possesses smell. (Reason)
It possesses smell, because while it does not manifest color, etc., it does manifest smell, like oil which manifests the smell of saffron. (Example)

By saying 'belongs to all living beings', the author guards against the doctrine that the nature of the sense-organ might vary with different kinds of living beings. To the question, 'If earth has the ability to manifest smell, why
B62,1 cannot all earth [substances] do so?' he gives his answer: BY PARTICLES OF EARTH WHICH ARE NOT SUPERSEDED BY WATER, ETC. This is why smell is

not perceived when [the olfactory organ is] superseded by the phlegmatic humor [i.e., when one has a cold]. The meaning of 'the olfactory organ' is well-known. This is the meaning [of the textual passage].

[28] To explain the third type of earth-product, the author says: OBJECTS ARE,
N255,1 HOWEVER, [PRODUCED BY THE PROCESS OF DIAD, ETC.]. Although a body too can be an object, when it is so, it is as a body that it provides a special instrument of satisfying human needs. To show this point, the author has described that particular form [of earth substance]. In what he is about to say, however, it is the state of being an object (*viṣayatva*) that constitutes the special means [for satisfying human needs]. Accordingly, this [form] is now stated.

The text says: BY THE PROCESS OF DIAD, ETC. This means that a diad is the first step in the process [of the formation of a diad, a triad, etc.], and that [a diad, a triad, etc., are] 'produced' or formed by this [process].

[29] [The text says:] OBJECTS ARE OF THREE FORMS: MUD, STONES, AND PLANTS. Mud-ness (*mṛttva*), stone-ness (*pāṣāṇatva*), and plant-ness (*sthāvar-atva*) are intermediate universals.

To the question, 'Where is mud-ness found?' the author gives his answer:
[30] OF THESE, THE GROUND, BRICKS, AND WALLS ARE MUD-DERIVATIVES.
B62,10 'Mud-derivatives' (*mṛdvikāra*) means derivatives which are in the form of mud.

[31] What are stones? The author answers: STONES INCLUDE ROCKS, GEMS, DIAMONDS, ETC. 'Gems' means rubies and the like. The word 'etc.' refers to chalk and so forth.

[32] The text says: PLANTS INCLUDE TREES, GRASSES, HERBS, BUSHES,
G43,1 CREEPERS, SPREADING PLANTS, AND FIG-TREES. 'Trees' (*vṛkṣa*) means those things which possess flowers, fruits, trunks, and branches. 'Grasses' (*tṛṇa*) are *ulapa* (Saccharum Cylindricum) and the like. 'Herbs' (*oṣadhi*) means barley (*yava*) and the like, which die after becoming ripe. 'Bushes' (*gulma*) means
B63,1 brooms;[74] 'creepers' (*latā*), squasch (*kuṣmaṇḍī*) and the like; 'spreading plants' (*avatāna*), *ketakī* and the like; 'fig-tree' (*vanaspati*), trees that have fruits without flowers.

In the term BODY are included the parts of a body, such as flesh and bones, and its derivatives such as milk and butter. In the term SENSE-ORGAN are included its parts; in the term OBJECT, diads, etc.; in STONES, sulfur, etc.; in PLANTS, leaves and flowers; in TREES, pieces of wood, etc.; in GRASSES, palmyra trees, etc.; in HERBS, rice grains, sesame seeds, etc.

Objection: What is the process of diad, etc.? There is no means for ascertaining [the existence of] diads. First, [the existence of] triads is ascertained

B63,10 by perception. They [i.e., triads] are large, because they are visible substances; for the property of being large and possessing a particular color is a cause of the visibility of substances. Otherwise, there would be no ratio of the size of an object to its being visible in a more distant place.[75] Since triads are large, and possess action and color, they possess parts and are products. Otherwise, there being no number belonging to the parts, the whole could not have largeness.[76] When [a thing] is permanent and has attained the final limit of smallness, [the thing] cannot be large. But the parts of a triad do not in turn have parts, because there is no means for ascertaining the existence of parts of it [i.e., a triad]. Unlike a triad, they [i.e., the parts of a triad] are not large, because that which is large and possesses a particular color must be visible. [No parts of a triad are, however, visible.] Even though they [i.e., the parts of a triad] have the size of an atom because they are not large, and even though they lack aggregation (*pracaya*) because they have no parts, they
B64,1 may produce large product substances by their being numerous. Thus the ultimate atoms are the parts of a triad; so why does one need [to postulate the existence of] the diad?

Reply: The diad exists, because a large product substance must be produced by substances which are themselves products. Otherwise, if a large substance were [directly] produced only by atoms numbering more than two [without following the process of diad, etc.,] a cow, a pot, etc., would also be produced only by them. [This is] a supposition contradicted by the fact that we perceive products of intermediate sizes, such as of small or smaller size.[77] Again the lines [of juncture] and the design would be as invisible in pots, etc., as they are in triads. If one failed to perceive differences of configuration, one would not perceive [the generic characters] such as potness that are thereby manifested.

You cannot suppose that those [atoms] which have already constituted [a product] may continue to constitute [other products] and that the intermediate products are therefore visible, for it is impossible that different corporeal substances should occupy the same space. Nor can you say that there would be no contradiction in the occupying of the same space if one
B64,10 [product] is smaller and the other larger. For in the space which is not
G44,1 occupied by the smaller product, the larger one can exist without contradiction, but in the space which the smaller does occupy, there would indeed be contradiction. If there were no contradiction even in that space, the corporeality [of the product] would have to be abandoned; [it would have to be something like] the color [that inheres] in one part.[78] [If your suggestion were accepted,] there would be no contradiction in occupying the same space

by conjunction as well [as by inherence] so long as one product were smaller and the other larger. But [we see that] a pot does not stand by conjunction in the same physical space that is occupied by a saucer.[79]

N260,1 Question: How then is it that we perceive successively smaller pieces of cloth as we take away from a cloth the last thread and then the next to the last?

Reply: We do so because a partial cloth is created from the remaining conjunctions [of threads] as soon as the hindrance [to this creation] is
B65,1 removed. You too must adopt this view if we take away one thread after another beginning with the *first* thread. Otherwise, inasmuch as all the products have been destroyed beginning from the two-thread cloth, there could arise no cloth at all and we should perceive nothing but the threads.[80]

Objection: One can consider the case of diads in a similar way. If a product substance is produced by many [diads directly without undergoing the diad-triad process], then a pot, etc., also would be produced directly by diads, and since there would be the impossibility of an intermediate series of products, we would fail to see those [intermediate products upon the destruction of the wholes]. Hence [we must made] a rule that they [i.e., diads] can only produce triads. But whether the triads are made by the ultimate atoms [or by these diads] comes to one and the same thing. You must either abandon your doctrine or show some special reason [why it is to be preferred].

Reply: We shall do so. As the requirement that a whole have parts comes to an end with atoms, so must the reduction of numbers of parts end somewhere. The number three (*tṛtva*) is not the final limit of reduction so long as
B65,10 two (*dvitva*) and one (*ekatva*) are possible. But of these, [the number] one cannot produce anything, as it cannot constitute a non-inherent cause in the absence of any conjunction of parts.[81] Or [we may make our point by saying that] in the absence of a number greater than one, the whole cannot assume a larger size than its parts. But it is a rule that the whole must be of larger size than its parts. And since a single part cannot be divided, the product of that part [i.e., its whole], as it could not be destroyed, would be eternal. Thus, two is the final limit of reduction [in the number of parts] and it is from two parts that production begins. Furthermore, that which is produced by two atoms cannot be a large[82] product, for there is nothing to cause it to be so [i.e., of large or visible size]. And if these diads did not produce that [i.e., a visible product] or[83] if they produced only that which possesses the number two, in either case their assumption would be useless. Hence the rule that when a large [visible] substance is produced by a diad, it must be by diads possessing a number greater than two.

It is not correct to say that, like diads, atoms may also produce a large substance by recourse to a number greater than two; for it is forbidden that origination should occur other than by the rule, and a cause of a cause does not produce that which is characterized by the generic character of the
B66,1 effects of its effects, as if we were to say that threads do not originate the
G45,1 cloth, but the cause of threads, viz., the fibers, [originate the cloth].[84]

Therefore, [one can set forth the following syllogism:]

Triads of the type under discussion are not produced by partless substances; that is to say, they are produced by substances which possess parts, (Thesis)
because they are large and are products, (Reason)
like the triads produced by diads whose existence is accepted by both the proponent and the opponent, or like a pot. (Example)

Objection: But in just the same way [one could infer that] a diad is also not produced by partless substances, that is to say, it is produced by substances possessing parts, because it is a product substance, like a triad or a pot.

Reply: One may not so infer, because such an inference would lead to a *regressus ad infinitum*. Thus the process [of origination] beginning with the diad is established.

END OF THE SECTION ON EARTH

WATER

G45,9 N265,1 [1] Now then [the author Praśastapāda] explains water. [The text says: A THING
B66,10 IS WATER] THROUGH ITS RELATION TO WATER-NESS. Water-ness is an intermediate universal (*sāmānyaviśeṣa*). 'Through its relation to that' is to be explained in the same way as before.[1]

To prove it [i.e., water] to be a substance, the author states its qualities:
[2] [WATER] POSSESSES COLOR, TASTE, TOUCH, FLUIDITY, VISCIDITY, NUMBER, MEASURE, SEPARATENESS, CONJUNCTION, DISJUNCTION, FARNESS, NEAR-
B67,1 NESS, HEAVINESS, AND INERTIA. The means for knowing these [qualities]
[3] are referred to: THESE ALSO ARE KNOWN TO EXIST [FROM THE *SŪTRA*] AS BEFORE. 'As before' means that just as [the existence of] smell in earth is known by the words of the author of the *Sūtra*, so [the existence of] color, etc., in water is known. Thus the *Sūtra* says: "Water is fluid, viscid, and possesses color, taste, and touch".[2] Just as [the existence of] the seven [qualities], starting with number, in earth is known by the word 'visible' [in the *Sūtra*],[3] so [the existence of these seven qualities] in water is known. Just as heaviness is known to exist in earth because [the *Sūtra*] mentions the falling [of an earth substance],[4] so [heaviness] is known to exist in water also. Just as inertia is known to exist in earth by the words 'successive motion'[5] [in the *Sūtra*], so [inertia] is known to exist in water also.

G46,1 Having thus proved water to be a substance on the basis that it has qualities, the author goes on to mention the particular qualities that establish
[4] water-ness, i.e., the factor distinguishing [water] from earth, etc.: THE COLOR, THE TASTE, AND THE TOUCH [OF WATER] ARE [RESPECTIVELY]
B67,10 WHITE, SWEET, AND COLD ONLY. The color of water is white, non-shining, and does not disappear [or is undisappearing] even when heated by fire a thousand times. It is not true that the color white found in earth substances, such as cloth and crystal, does not disappear when heated by fire. Even though the color of fire does not disappear, it is shining. Therefore, the color [accompanied] by this qualifier [i.e., the property of being non-shining and undisappearing] can serve to identify water. This qualifier is implied by our observation that the color of earth results from 'cooking' and by the statement that the color of fire is shining. By the same reasoning, the color of water and other [substances] does not result from 'cooking'. [Otherwise, the color of a

water substance would change or disappear when heated by fire.] [6] What undergoes chemical change [or 'cooking'] when boiled in certain places [such as a pan] is only the earth parts which are commingled [with the water parts].[7]

B68,1 Taste has also been explained by the above. Although sweetness is found in earth substances, such as milk and candied sugar (*śarkara*), it is not the case that it is not removed by chemical changes [or 'cooking'].[8] But here [i.e., in water] sweetness remains even when something is cooked a thousand times. This is true even if it retains its characteristic, [i.e., sweetness] to only a slight degree.[9] It is true that one can perceive [various kinds of] tastes of water, such as salty, according to whether [it comes from] an ocean or a river, but this is possible because an earth substance is contained [there]. An example of this is the astringent [taste] of Daśamūla (a tonic medicine prepared from ten roots). Otherwise, how could it be that the taste of that [i.e., water] which has been absorbed by and then released from the clouds is only sweet?[10]

N270,1 Likewise, the touch of water is only cold, for while this cold touch, although present, may not be perceived because of the touch of fire, it will be perceived when the fire is removed. Thus, it is said that the color, taste, and touch accompanied by those qualities [i.e., whiteness, sweetness, and coldness] are the factors that identify water.

[5] The author indicates that viscidity belongs [to water] by nature: VISCIDITY BELONGS ONLY TO IT [i.e., WATER].

Objection: Viscidity is not a property of water, because it is not found in
B68,10 water in the same way as [it is found in] oil, etc. It is not a special quality of earth either, because it does not pervade earth [in other words, it is not found in every earth substance]. Therefore, it is an intermediate universal (*sāmānyaviśeṣa*) found in individual earth substances, such as butter, oil, and fat. One can compare viscidity to the 'yogurt-ness' found in the milk of cows, the milk of buffaloes, etc.[11]

Reply: That is not correct, because there are degrees of viscidity, as a thing is viscid, more viscid, and so on. There are no degrees of cows, buffaloes, etc., without reference to qualities. We do not say that something is 'slightly cow' or 'very cow' in the way we say that something is slightly sweet, very sweet, and so on. Therefore as differences in degree (*atiśaya*) are limited[12] to qualities and cannot obtain in a universal by its being an intermediate universal, viscidity must be a quality. Furthermore, since successively smaller parts of viscid substances are also viscid, viscidity would be found down to the atoms. And there are no generic characters lower than earth-ness [in an

earth atom], because no establishers [of such generic characters] are found [there].[13]

Objection: [Viscidity] may be found [in a water atom] in the same way that milk-ness, etc., is found [in an earth atom].

Reply: No; because it [i.e., milk-ness] is not found in an atom because of the following facts: Milk-ness, etc., is manifested by the particular touch, taste, and color that result from 'cooking'. Accordingly, when these [qualities]
B69,1 disappear through another 'cooking', milk-ness, etc., necessarily disappears, and we cannot allow a universal to disappear while its individuals exist. [In this case the individuals, being atoms, must always exist.] Such [qualities] without actually existing cannot be [permanent] manifestors of it [i.e., milk-ness] by the mere possibility [that they might occur again].[14] If all the atoms of earth had milk-ness, all their products would have milk-ness in addition to earth-ness.

Objection: It [i.e., viscidity] might be found in a diad, etc., in the same way that milk-ness [is found there].

Reply: No, for the [individual] atoms that compose the diad do not possess particular qualities that could establish viscidity [in the diad] in the same way that they possess particular qualities that establish milk-ness,[15]
G47,1 or, if there is [such a quality] it will be nothing but viscidity itself.[16] Here neither color and other [qualities] nor their varieties can be the cause of establishing [viscidity]; because they establish butter-ness, etc., [not the viscidity found in butter, etc.]. There cannot be one general establishing cause [of both viscidity and butter-ness], because [viscidity is found in oil, butter, and fat, and] oil, butter, and fat have their sources in such various
B69,10 substances as seeds, milk, and meat.[17] That is why the viscid part of coconuts [as with all other seeds] is oil, It is only called butter because of the similarity of its taste to butter.

Therefore, it stands to reason that viscidity is the particular quality [of water] which exists down to atoms and also up to the final whole by the successive transmission of qualities from causes to effects.[18]

It is not only in butter that we perceive viscidity; it is merely that we perceive viscidity there in its highest degree. One can say the same thing concerning the heaviness of gold.[19] As a matter of fact, 'being viscid' (*snigdhatā*) is common[20] to everything [made of] water. Otherwise, barley-flour, sand, etc., would not hold together when one moistens them, for 'holding together' is a particular kind of conjunction which brings about retention and attraction and is caused by a combination of viscidity and fluidity. Fluidity alone is not a sufficient cause, because things such as

glass or gold cannot bind such things as sand together, even when thor-
N275,1 oughly melted. Neither is [holding together] caused by viscidity alone,
B70,1 because frozen butter also cannot bind together [such things as sand]. Thus
the holding together [i.e., agglutination] of objects, which is caused by every kind of water, establishes the viscidity [of water] as being natural to it just as it does its fluidity.

Objection: Still, viscidity might be conditional in earth, like the conditional fluidity [of earth], because viscidity is perceived in earth substances, such as butter.

Reply: [No,] for with respect to viscidity there are no agreements in positive and negative concomitances [as there are with respect to fluidity]. Thus, among non-fluid things, such as lac and butter, fluidity appears when they are heated by fire and disappears when water, which is incompatible with fire, is applied. This is not the case with viscidity. Therefore, substances such as butter are produced from diads which in turn are produced from [earth] atoms which possess a certain smell, taste, color, and other qualities when subjected to 'cooking'; but within this [butter] are particles of water
which as adscititious elements furnish the occasion [for its viscidity]. We
B70,10 perceive this viscidity through its inherence in the water particles which are in
conjunction [with the earth substance].

[6] [The text says:] FLUIDITY ALSO IS NATURAL. The word 'also' (*ca*) shows
that we are to supply 'in water only' from the preceding clause. Since it is proved that oil, milk, etc., are made of earth, the perception of it, [i.e., fluidity in these substances] is through its inherence in those [particles of water] that are in conjunction [with the earth substances].

Question: How can those things which are cold and viscid be made of earth?

Reply: One may infer that oil is made of earth because it forms an earthy fuel for fire (*bhaumānalasādhana*),[21] just like butter. One may infer that lac and milk are made of earth because they remain recognizable when coagulated, just like butter.

[7] [The text says:] IT [I.E., WATER] IS ALSO (*TU*), AS BEFORE, OF TWO
G48,1 SORTS: PERMANENT AND IMPERMANENT. The word '*tu*' means 'also'. Just as
earth is of two sorts, so is water. 'As before' means that [water is found] in the form of atoms and in the form of products as well. In other words, just as earth is permanent and impermanent, so is water. Now the nominative pronoun ('it') is shifted to the genitive ('its').

[8] ITS (*tāsām*) PRODUCTS ARE OF THREE SORTS, CALLED 'BODY', 'SENSE-
B71,1 ORGAN', AND 'OBJECT'. The meaning of this passage is easily explained, for
we can explain it in the same way that we explained earth.[22]

Water can produce bodies somewhere, (Thesis)
because it can produce substances, (Reason)
like earth, (Example)

The reason is as follows: The ability of a substance to produce other substances is in positive and negative concomitances with these latter being in the states of body, sense, and object. Whatever produces one of these states produces the others also. Whatever does not produce one of them does not produce any of them. Then, if water did not produce bodies, it would not produce sense-organs, or objects, either. That is, however, not the case. Therefore, it is proved that [water] does produce bodies somewhere.

Now in answer to the question, 'What kind of bodies [does water pro-
[9] duce?]' the author says: ITS BODIES ARE NEVER BORN FROM UNION [OF SEMEN AND BLOOD], for semen and blood [that go to make a body born from sexual union] are always made of earth. Earth substances cannot
B71,10 produce water substances. Hence bodies made of water are never born from sexual union.

To the objection, 'There cannot be any body made of water because we have never seen one', the author gives his reply: [THE BODIES MADE OF WATER ARE FOUND] IN THE WORLD OF VARUṆA [THE GOD OF WATER]. One cannot see them because they are distant and separated by something intervening, not because they do not exist. It is meant here that one can know of their existence by scriptural authority.[23]

To the question 'Since water is fluid[24] by nature, how can the bodies
[10] made of it be places (*āyatana*) of enjoyment?' the author replies: AND CAN ENJOY BY MEANS OF EARTH-PARTICLES WHICH ARE COMMINGLED [WITH THE PARTICLES OF WATER]. Just as bodies made of earth, because of the hardness of earth, can enjoy [objects] only because of the commingling [of their earth with other particles], so [bodies made of water] can enjoy [objects] due to the commingling of their water with particles of earth, even though they are fluid because of water-ness.

It is only prohibited [in our theory] that substance produce a heterogeneous substance. [For example, water atoms cannot produce an earth substance.] Mutual assistance [between different substances] is, however, not[25] prohibited.

[11] [The text says: WATER IN THE FORM OF] SENSE-ORGAN IS THE GUSTATORY ORGAN WHICH MANIFESTS TASTE, BELONGS TO ALL LIVING BEINGS, AND IS MADE OF WATER PARTICLES UNSUPERSEDED BY PARTICLES OF
B72,1 OTHER [SUBSTANCES]. The sense-organ which enables us to perceive taste is made of water. Here also the true nature [of the gustatory organ] is known through its function of perceiving taste:

[The sense-organ of the type we are concerned with] is made of water,(Thesis)
because it manifests the taste, but does not manifest color, etc., (Reason)
like water manifesting the taste of barley-flour (*saktu*).[26] (Example)

In order to eliminate the doubt that the nature of the sense-organ might differ from one kind of living being to another, the author says, "belongs
G49,1 to all living beings". Then the author says, "[is made of water particles] unsuperseded by particles of other [substances]". He says this because the tongue becomes numb when superseded by the humours of the body, such as the windy humour (*vāta*). What is it [i.e., the sense-organ made of water] called? It is called 'the gustatory organ'.

[12] The third variety is explained: [WATER IN THE FORM OF] OBJECT CONSISTS OF RIVERS, OCEANS, SNOW, HAIL STONES, ETC. In the section on fluidity the author will explain how snow and hail can be solid while they are made of water.[27]

END OF THE SECTION ON WATER

FIRE

[1] B72,10 G49,8 N281,1 The definition of fire is given: [A THING IS FIRE] THROUGH ITS RELATION TO FIRE-NESS. One can explain this passage in the same way as before.[1] To prove it [i.e., fire] to be a substance, the author mentions the qualities [of
[2] fire]: [FIRE] POSSESSES COLOR, TOUCH, NUMBER, MEASURE, SEPARATENESS, CONJUNCTION, DISJUNCTION, FARNESS, NEARNESS, FLUIDITY, AND INERTIA. Referring to the means of knowing these [qualities], the author
[3] says: THESE ARE KNOWN TO EXIST [FROM THE *SŪTRA*] AS BEFORE. [The existence of] color and touch [in fire] is known [or ascertained] by the words in the *Sūtra*, 'Fire has color and touch';[2] [the existence of] the seven qualities starting with number, by the word 'visibility';[3] fluidity, by the words 'similar to water';[4] inertia, by the words 'successive motion'.[5] Thus, as in the case of earth, these [qualities of fire] are established. The sense is that [they are] well known (*prasiddha*).[6]

[4] The author mentions the particular characteristics that distinguish fire-
B73,1 ness: THE COLOR [OF FIRE] IS, HOWEVER (*CA*), WHITE AND SHINING. The particle '*ca*' must mean 'however' and distinguish [the color of fire] from the colors of earth and other [substances]. 'Shining-ness' (*bhāsvaratva*) is an intermediate universal (*sāmānyaviśeṣa*), and this [universal] is manifested as that which illuminates other colors. This color is found only in fire. Hence, the statement that fire is of shining color is for definition; the statement that it is white is to show its original nature. We may apprehend fire as red or the like when it is in the presence of burning fuel, but where there is no burning fuel, as in the rays of the moon, stars, etc., we apprehend it only as white.

One would be wrong to say, 'In that case also, we perceive the color white [in water] because water is acting as a fuel and is transmitting the color of water'. The color of water does not supersede that of other [substances], for a color, such as indigo, does not become white when it is soaked in water.[7]

[5] THE TOUCH [OF FIRE] IS HOT ONLY. Since one cannot perceive [a hot
B73,10 touch] in moon-rays, gold, the visual organ, etc., one might object to the view [that the touch of fire is hot only]. In order to eliminate this disagreement, the author has employed the word 'only'. One may infer that these substances are hot because they are made of fire. The reason their heat is not perceived is because it is not manifested, not because it does not exist.

[6] IT [i.e., FIRE] IS ALSO OF TWO SORTS: ATOMS AND PRODUCTS. The
G50,1 meaning of this passage is the same as before [i.e., in the cases of earth and water].[8]

[7] Differences in products are explained: PRODUCTS [MADE OF FIRE ATOMS] ARE OF THREE SORTS BEGINNING WITH BODY, AND THEY HAVE THE NAMES 'BODY', 'SENSE-ORGAN', AND 'OBJECT'.

As bodies made of fire cannot be seen, unlike bodies made of earth, the
[8] text says: [FIRE IN THE FORM OF] BODIES IS NOT BORN FROM SEXUAL UNION, IS FOUND IN THE WORLD OF ĀDITYA [THE SUN GOD], AND CAN ENJOY THROUGH THE EARTH PARTICLES WHICH ARE COMMINGLED [WITH THE PARTICLES OF FIRE]. One can prove, as in the case of water, that fire can also produce bodies. Imagining a flaming fire, one might wonder what kind of enjoyment is possible through it [i.e., fire]. Hence, the text says, " . . . [can enjoy through the particles of] the earth".

[9] [The second sort,] sense-organs are explained: [FIRE IN THE FORM OF] SENSE-ORGANS ARE THE VISUAL ORGANS WHICH MANIFEST COLOR, BELONG TO ALL LIVING BEINGS, AND ARE MADE OF PARTICLES OF FIRE UNSUPERSEDED BY PARTICLES OF OTHER [SUBSTANCES]. The sense-organ that manifests color but does not manifest smell, etc., is made of fire. The purpose
B74,1 of the passage 'belongs to all living beings' is to eliminate the doubt that the nature of the sense-organs might differ from one kind of living being to another. The menas of ascertaining the existence of it [i.e., the sense-organ
N285,1 made of fire] is its function of perceiving color. The means of ascertaining that it is made of fire is that it manifests color, as does a lamp, but not taste or [the objects of] the other [senses].

Here some say: The visual organ (lit., the eye: *cakṣu*) does not function by coming in direct contact [with its object] for the following reasons:

(1) The visual organ perceives objects which are not directly connected with its locus [i.e., with the eyeball]. That which functions by coming in direct contact [with its object] does not perceive objects which are not directly conjoined with its locus, as is seen in the case of the gustatory organ (*rasana*).

(2) [The visual organ can] perceive things which are larger [than itself]. If the visual organ functioned by coming in direct contact [with its object], it could not perceive objects that are larger than itself. Obviously, a nail cutter cannot cut things that must be cut by an axe.

(3) The branches of a tree and the moon can be seen at the same time. If the visual organ perceived its objects only after having reached [them], it
B74,10 would perceive first near objects and then distant ones, and accordingly it

would not perceive the two at the same time. But one perceives the branches of a tree and the moon as soon as one opens one's eyes.

(4) [The visual organ] perceives objects through glass, clouds, crystal, etc. If the visual organ functioned by coming in direct contact [with its objects], it would not take in a blade of grass or the like that is unattainable because of the interposition of a substance such as crystal. Accordingly, the visual organ does not function by coming in direct contact [with its object], and therefore it is not made of fire.

G51,1 Reply: This opinion is wrong, because:

(1) The grasping of objects which are not directly connected with the locus [of the visual organ, i.e., the eyeball] is an inconclusive mark, as witnesses a lamp. [The lamp grasps, that is, illumines objects which are at a distance.] [9]

(2) The visual organ can perceive things larger than itself because of the expansion of rays as they go out from a point.[10]

(3) As for the simultaneous perception [of near and distant objects], this is not actually proved to occur, for the close succession of [moments of] time can explain our assumption. The speed of fire is very great because of its
B75,1 exceeding lightness. That is why people assume that light is insde their house at the exact moment that blessed sun rises from the eastern horizon.

> Some say that ocular fire as a combinable substance unites with the fire of external light to form the ocular organ which may therefore be in contact with two objects simultaneously. In this way they answer the problem of how simultaneous perception of the branch and the moon may be possible.[11]

Reply: This [opinion] is wrong, for, if it were true, we should perceive [even] things hidden behind our back. Straight extension of space is needed for the [visual] organ to reach [its object]. Indeed one can see [objects] through materials such as crystal, but one can do it because those materials do not prevent the fire [released from the visual organ] from going through themselves, as they are transparent by nature. One can observe the same of the light of a lamp.

As for those who claim that the visual organ functions without coming in
B75,10 direct contact with its object, we may ask why they do not see what is hidden by a wall, etc., for it is just like that which is not hidden insofar as there is no difference in its non-attainment by the organ. The obstacle [put between the eyes and their objects] cannot prevent the effect [i.e., the perception of

objects] by its mere existence, or in any other way than by its preventing direct contact. Otherwise, by its mere existence no perception could occur anywhere.

It is senseless to say that 'what is capable' (*yogya*) [of being perceived] is grasped by 'what is capable' [of perceiving], and also there is no sense in saying that the objection in question is not perceived, not because it is concealed [by the wall, etc.], but because it itself is incapable [of being perceived].[12] The natural capability of things is lasting. Accordingly, it will not disappear even at that time [when some concealing obstacle is put between the thing and the eye].[13] Even in the doctrine that things are momentary, it is cooperative causes which are connected that produce an additament (*atiśaya*) [i.e., the effect of those causes]. Even a thousand cooperative causes, if they are not connected, do not make things bring forth an additament.[14] According to the Buddhists, this connection (*pratyāsatti*) is an immediate succession (*nirantarotpāda*) [of point-instants]; according to us, it is nothing but conjunction between two substances.[15] Between the eyeball and the object [to be seen], however, there is neither immediate succession nor con-
B76,1 junction. Accordingly, what remains is [a connection] with an imperceptible entity that resides in the eyeball and by its movement therefrom [becomes connected] by a relation of immediate succession or by conjunction. We shall explain the problem later. Let it suffice here merely to point it out.

Why is it only this [visual organ] that is thus [i.e., capable of manifesting color]? Why cannot other things [that possess fire] such as steam do the same? In answer to this question the text uses the word 'other'. ['The visual organs are made of particles of fire which are not superseded by particles of other substances.' Steam is thus ruled out, for it is superseded by particles of water.] The word 'other' has a further implication, namely that if the other substance is homogeneous and stronger, the weaker one will be superseded. How else would we explain the fact that the eye is superseded by the [blinding] fire of the sun and [in that] state unable to perceive colors? The meaning of 'visual organ' is known to everyone.

[10] In order to describe the classification of objects, the text says: THAT
G52,4 WHICH IS CALLED 'OBJECT' IS OF FOUR VARIETIES: EARTHLY, HEAVENLY, VISCERAL, AND DERIVED FROM MINES. What is called 'object' is of four varieties:

(1) 'Earthly [fire]' means fire which comes from the earth,
(2) 'heavenly [fire]' means fire which comes from the sky,
(3) 'visceral [fire]' means fire which belongs to the stomach, and
(4) '[fire] derived from mines' means [fire] which is produced from mines.

[11] [The text says:] EARTHLY FIRE COMES FROM WOODEN FUEL, HAS THE NATURE OF FLAMING UPWARD AND IS CAPABLE OF 'COOKING', BURNING, CAUSING SWEATING, ETC. The word 'wooden' implies also earthly products
B76,10 that come from plants, [such as charcoal].[16] Flaming upward is the nature.
N290,1 Under 'nature' we understand a property (*dharma*) connected with a generic character. Then the author explains how [earthly fire] serves the purposes of others by saying, '[it is capable of] "cooking", etc.' Here 'cooking' means 'the softening of food' (*vikledana*) or 'the alteration of color' (*rūpaparāvṛtti*). 'Sweating' (*svedana*) means the removal (*apagama*) of the windy humour (*vāta*) and phlegm (*sleṣman*).[17] The word 'etc.' refers to the cessation of pain caused by coldness and the occurrence of pain caused by burning.

[12] [The text says:] HEAVENLY FIRE HAS WATER FOR ITS FUEL AND CONSISTS OF SUN-RAYS, LIGHTNING, ETC. Heavenly fire is fire whose fule is
B77,1 water. What does it consist of? It consists of the fire of the sun (*saura*) [i.e., sun-rays], lightning (*vidyut*), and the like. The word 'etc.' implies that submarine fire (*vaḍavānala*) is also heavenly.

[13] [The text says:] VISCERAL FIRE CAN DIGEST EATEN FOOD INTO 'A CONSTITUENT FLUID OF THE BODY' (*RASA*), ETC. Since food, such as rice-pudding, is taken (*āhṛyate*) [into our stomach], it is called *āhāra* ('that which has been taken'). Visceral fire causes the digestion of it [i.e., food] into 'a constituent fluid of the body', etc. The food which has been eaten is earthly and aqueous fuel for the visceral fire. The result is taste, etc. The word 'etc.' refers to excrement and 'essential ingredients of the body' (*dhātu*). 'The results of digestion' (*pariṇāma*) are nothing but those things into which it [i.e., food] has changed.[18] [Visceral fire] is the instrumental cause of those [results of digestion.]

[14] [The text says: FIRE] DERIVED FROM MINES [I.E., MINERAL MATERIAL] CONSISTS OF GOLD, ETC. The word 'etc.' refers to the [others of the] eight minerals: silver, copper, bell-metal, etc.

Question: How can mineral materials be made of fire? Although heaviness, etc., may be perceived [in gold, etc.,] through their inherence in that [earthly component] which is in conjunction [with the fiery particles], the earthliness of gold is still proved by the fact that it becomes fluid only under special circumstances, as in the case with butter. Nor [can we say that] this fluidity
B77,10 would disappear under the continued application of fire, if gold were earthly, just as it does in the case of butter; for one cannot show such [a concomitance].[19] Moreover, the discrepancy in some particular instance [of the *pakṣa*] with that [of the example] does not imply an error of inference.[20] We will deal with this problem later.[21] Nor can we say that we have a valid

contradiction [to the inference that gold is earthly] by reason of its non-disappearing fluidity because this mark is missing in [members] both [of] the *sapakṣa* and the *vipakṣa.*[22] Moreover, those [such as Udayana himself] who consider gold to be made of fire must admit that particles of earth support gold, [i.e., support the fiery particles of gold, so that gold can be solid].[23] Now these [particles of earth] cannot be non-fluid at the time of fluidity [of the fire substance]. Accordingly, non-disappearing fluidity is thus found there [i.e., in the earth particles] too. Since the mark [non-disappearing fluidity] thus occurs in a part of the *vipakṣa*, the mark is contradicted. These are matters upon which the wise should poder.

[My own reflections are] as follows. Since these [mineral materials, such as gold and copper,] have color, they must be one of the three substances [i.e., earth, water, or fire]. Everybody agrees with this. Of these, they are not made of water, because they lack natural fluidity and natural coldness, and because they cannot bind other substances by their invariable viscidity. One cannot say that they are made of earth simply on the grounds that they become fluid under some particular circumstances, for there is no argument to prevent this occurrence in the other alternative [viz., in that which is not
G53,1 made of earth].[24] Nothing prevents the possibility of fluidity in a substance
B78,1 other [than earth] under some particular circumstances. This occurrence is not bound to a particular category of substance, as it is, for example, the upward motion of flames or the oblique motion of wind, for it is not found throughout a category.[25] Neither is this [conditional fluidity] bound to a particular subcategory of earth, because clarified butter and the like [e.g., lac] possess different generic characters. Accordingly, like the trembling [of a tree], fluidity which is brought about by conjunction with fire as helped by an Unseen Force (*adṛṣṭa*) bound to the cause of this or that enjoyment [or use], is not a mark for establishing earth-ness, etc.

On the other hand, there *is* a rule of concomitance that the color of an earth substance changes through conjunction with fire if no obstacle is present, while it does *not* [change] if [an obstacle] *is* present. When a pot, etc., is being heated [directly] by fire one sees this change, which one does not see when water is introduced.[26] Hence, a cause-effect relation is established here. Now gold and the like do not lose their original color even
B78,10 when intensely heated, nor do they acquire another color. Hence, they are determined to be not made of earth, just as water may be similarly determined. This is why even the particles of earth which support gold [giving it solidity] continue to be of a similar color, for they are bound to this other [fire-]substance. That we see the color of red sandalwood when gold is

smelted by the *puṭapāka* method,[27] etc., is due to its being commingled with some substance or other that supersedes it.

The formal demonstration is as follows:

Gold, etc., is not made of earth, (Thesis)
because its color does not change even when intensely heated, (Reason)
N295,1 like water, and (Example)
it is made of fire (Thesis)
because it has color, being made neither of earth nor of water, (Reason)
like the rays of the sun. (Example)

Quicksilver, etc., has been also explained by above. One may prove that it is not made of water, simply because it does not bind together other substances. That it possesses natural fluidity is ruled out by the fact that its fluidity is generated by contact with fire. It can have the property of another category like those fire substances that have water for their fuel, because scripture assures us that it *is* a fire-substance.

One might object that quicksilver cannot be made of fire because it does not have the shining color [peculiar to fire]. But that would not be correct, for it is not proved. A lamp does not cease to be shining although outdoors at middays it is not perceived as shining. We can reasonably explain the non-perception [of it] by simply assuming that [it is] superseded by the color of the supporting substance.

But why can we not explain the non-perception [of the color of the lamp or of mercury] by its being unmanifested, as the fiery color of the rays issuing from the eye is unmanifested? We cannot, for at that rate we must fail to perceive the substances themselves, gold, [lamp, mercury], etc. A substance that has unmanifested color [e.g., the rays emitted by the eye] is imperceptible. [If you give up the explanation that the color is superseded for an
B79,1 explanation that it is unmanifested], we would see summer heat at night, [for you cannot argue that summer heat has unmanifested color.]

Objection: But even if we take the explanation that the color is superseded, we would be forced in the same way to deny our perception of the light of a meteor at midday.

Answer: No. It does not follow from the superseding of the color that the substance itself is not perceived, or we would fail to perceive a [white] cloth when its whiteness is superseded by saffron dye. Accordingly, it is only the color that is not seen because of its being superseded. It is not seen because of the great collection of light [outdoors] just as a drop of ink is not seen in a heap of black beans. This clears up the whole problem.

[15] If so, why is taste perceived in gold, etc.? The author says: THERE [IN

GOLD AND THE LIKE] ONE CAN PERCEIVE TASTE, ETC., THROUGH ITS INHERENCE IN [PARTICLES OF EARTH] WHICH ARE IN CONJUNCTION WITH THE FIRE PARTICLES OF GOLD].

END OF THE SECTION ON FIRE

NOTES

NOTES TO THE SECTION ON EARTH

[1] The *Kiraṇāvalī* (*KV*) deals with universals especially from B, 22, 1 (page 22, line 1 of the Benares edition) up to B, 24, 12.

[2] The property of possessing ultimate distinction is not found in impermanent substances.

[3] Ultimate distinction is found, for example, in substances such as direction and time. Therefore, the property of possessing ultimate distinction cannot be used to differentiate direction from time.

[4] Praśastapāda's word *ekaikaśam* contains two elements expressive of *vīpsā* (frequency, repetition). (1) The *āmreḍita* reduplication of *eka: ekaika.* Such compounds by Pāṇini 8, 1, 4: *nityavīpsayoḥ*, give the sense of constancy (*nitya*) or frequency (*vīpsā*). (2) To this compound is added the suffix *-śas*, which Pāṇini says may be added to numerals in the same sense of frequency (*vīpsā, Pāṇini*, 5, 4, 43: *saṃkhyaikavacanāc ca vīpsāyam*, e.g., *daśaśas*, 'ten by ten', indicating a frequency of tens). Udayana explains that a high degree of frequency is therefore Praśastapāda's intention. We will now describe the numerous differentiations of each individual substance from other substances.

[5] Cf. Introduction, p. 70.

[6] The relation between earth-ness and earth is diadic. The relation *ekārthasamavāya* and *samyuktasamavāya*, on the other hand, is triadic. The first of these subsists between a quality and earth-ness, as when earth-ness inheres in that earth in which color inheres. The second may obtain between water and earth-ness, as when earth-ness inheres in earth which is in contact with water.

[7] Lit., 'there will be no base for the mark (*hetu*) to reside in'. If one would infer 'there is earth because it possesses earth-ness', one must have some notion of what earth-ness is. Without such knowledge, one cannot find where it resides.

[8] Cf. Part I, Chapter 5, B.

[9] Udayana has admitted that while he knows earth-ness, he does not yet know that it differentiates earth from other things. Thus, in his negative syllogism, the *pakṣa*, earth, is imperfect. One cannot infer anything about such vague objects as those that lack a qualifier (*viśeṣaṇa*). In our ignorance we might take its qualifier to be anything. One can find qualifiers for some examples of earth (a pot, a cow, etc.), but not of other things (atoms, etc.).

[10] The Nyāya theory holds that when we look at a pot, we see pot-ness, a factor which distinguishes the pot from everything that is not a pot.

[11] As far as visible things, such as a pot, a cow, and cloth are concerned, it is rather easy to differentiate earth substances from that which is not an earth substance. But in the case of invisible things, such as an atom, we must depend upon means other than perception. The existence of the factor differentiating any earth substance from other substances is thus not proved in all earth substances by direct perception and open to further examination. Hence the proof stated in the text is not useless.

[12] Cf. P, 68, 21: *vyavahārabhedānyatarasādhakatvaṃ viśeṣaḥ.*

[13] The *Nyāyabhūṣaṇa* (*NBS*) states that some scholars hold that a definition (*lakṣaṇa*) is a mark for a negative concomitance (*NBS*, p. 11), and the editor of this text, Svāmī Yogīndrānanda, holds that they are Vācaspatimiśra and others (Footnote to *NBS*, p. 9, 1.11).

[14] *NV*, p. 28, 1.9: *lakṣaṇaṃ khalu lakṣyaṃ samānāsamānajātīyebhyo vyavacchinatti* . . . . According to *NVTT* (p. 156, 1.18), 'similar things' indicates means of correct knowledge such as perception, and so on; 'dissimilar things', fallacious means of knowledge, and so on. Cf. B. K. Matilal, '*Kiraṇāvalī*', *The Encyclopedia of Indian Philosophies*, Vol. II, Motilal Banarsidass, Delhi, 1977, p. 591.

[15] '*Loke na*' (B, 42, 17) should be '*lokena*'. The N edition has the latter reading (N, 194, 4).

[16] Here in this syllogism Udayana introduces the relation between word and object into the content of the above syllogism (cf. B, 41, 14). These two syllogisms have parallel structures in the same way as Text 14 and Text 18 in the *Lakṣaṇāvalī*. Udayana composes Text 18 by introducing the relation between word and object into the content of Text 14.

[17] In the present inference, the *pakṣa* is earth as being the object of the expression 'earth'. The qualifier (*viśeṣaṇa*) of the *pakṣa* is simply the expression 'earth' (*pṛthivīvyavahāra*), and not earth-ness, to which the fault of being unknown was ascribed in the preceding section.

[18] So far we have not prove that the expression 'earth' can apply to all earth substances. It still remains to be shown that what is to be proved is established in all the *pakṣa*. Therefore, we are not making the mistake of proving a self-evident matter.

[19] It is impossible to verify whether all the substances which are said to be made of earth possess earth-ness or not. Hence, one cannot make the statement of positive concomitance, 'Whatever is made of earth possesses earth-ness'.

[20] The pronouns *yat* and *tat*, used in the negative concomitance, since they are positive terms, are really serving in a positive concomitance. Udayana's point is that whatever the nature of the terms, the concomitance is negative.

Udayana does not admit the validity of the positive concomitance, 'If x possesses earth-ness, x is called "earth" ', for he holds that it is impossible to verify all the possible instances of positive concomitance in the world. On the other hand, he admits the validity of the negative concomitance, 'If x is not called "earth", x does not possess earth-ness', for he assumes that one can eliminate everything that is *not* called 'earth' from that which is called 'earth' in the world. This is why Udayana defines the *lakṣaṇa* as a *hetu* for negative concomitance.

21 Udayana quotes this passage from the *Nyāyabhūṣaṇa* (*NBS*), but the text of *NBS* edited by Svāmī Yogīndrānanda has a slightly different reading: The following words, 'qualifier' (*viśeṣaṇa*), 'indicator' (*aṅka*), 'sign' (*cihna*), 'defining character' (*lakṣaṇa*), are synonymous (*NBS*, p. 7, 1.16: *viśeṣāṅkacihnalakṣaṇaśabdānāṃ paryāyatvāt*). Bhāsarvajña does not make a special distinction between *lakṣaṇa, cihna*, etc.. Udayana, however, distinguishes rigidly the *lakṣaṇa* (definition) from the rest, for he holds that the *lakṣaṇa* pertains only to negative concomitance.

22 *VS*, 1, 1, 14.

23 *PBh*, p. 25, 1.1: *kṣityudakātmānāṃ caturdaśaguṇavattvam.*

24 Here one can express the argument as the following inference:

> Earth possesses the factor differenting itself from other things (*pṛthivī itarabhedavatī*), because it, being possessed of smell, possesses color, etc. (*gandhavattve sati rūpādivattvāt*).

The term 'qualifier' (*viśeṣaṇa*) in the text refers to the property of possessing color, etc. (*rūpādivattva*). The property of possessing smell (*gandhavattva*) is capable of differentiating earth from other things. Therefore, the property of possessing color, etc., is redundant.

25 *VS*, 2, 1, 1: *rūparasagandhasparśavatī pṛthivī.*

26 *VS*, 4, 1, 12: *saṃkhyāḥ parimāṇāni pṛthaktvaṃ saṃyogavibhāgau paratvāparatve karma ca rūpidravyasamavāyāc cākṣuṣāṇi.*

27 *VS*, 5, 1, 7 in both the G.O.S. edition and the S.B.H. edition has the following reading: *saṃyogābhāve gurutvāt patanam* (In the absence of conjunction, there can be [the action of] falling on account of heaviness).

28 The term 'opposite' (*viparyāsa*) here means the commonality of locus, i.e., the fact that x and y exist in the same locus. *Nodana*, which is a kind of conjunction, resides in a body. Motion also resides in a body. *Nodana*, is the non-inherent cause of motion. Thus *nodana* and motion share common loci.

29 *VS*, 2, 1, 6: *sarpirjatumadhūcchiṣṭānāṃ pārthivānām agnisaṃyogād dravatā'dbhiḥ sāmānyam.*

[30] *VS*, 5, 1, 17: *nodanādādyamiṣoḥ karma karmakāritāc ca saṃskārād uttaram tathottaram uttaraṃ ca.*

[31] The question arises: how do we perceive the fluidity in earth? We might be tempted to say: in just the same way as we perceive other qualities of earth (color, taste, etc.), i.e., by *samyukta-samavāya*. The eye or the organ of touch comes in contact with the earth-substance in which fluidity is inherent. But this explanation will lead us astray, because there are two kinds of fluidities. The fluidity in milk (*kṣīra*) inheres in the particles of water that are associated with the earth-substance milk (milk *is* an earth-substance because it is the product of an earth-body), whereas the fluidity in butter inheres in the particles of earth. Cf. *Nyāyakośa*, s.v. *dravatva: tailakṣīrādāv api jalasyaiva dravatvam*; *NSM* 39: *tailādāv api jalasyaiva dravatvam*, on which Dinakara remarks: *tailādav ityādipadena kṣīraparigrahaḥ, na tu ghṛtasya, tatra naimittikadravatvasya samavāyenaiva sattvāt.*

One makes this distinction because the two sorts of fluidities act differently. The fluidity inherent in earth is conditional fluidity; it manifests itself only in the presence of heat. The fluidity inherent in water is natural fluidity; it is always perceptible.

The fluidity inherent in water is perceptible in just the same way that the color, etc., in water is perceptible, viz., *samyukta-samavāya*. But the fluidity that inheres in earth is cognizable only by a perception plus an inference. When we see the fluidity in melted butter, we must say to ourselves, 'This fluidity occurs only when heat is applied, being absent otherwise'. It therefore does not belong to another substance (viz., water) but belongs to the butter itself.

[32] The organ of smell is composed of particles of earth, but we do not smell our olfactory organ.

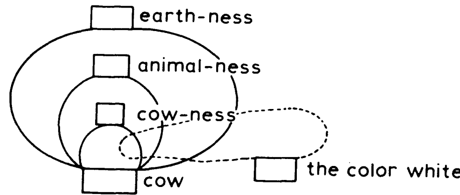
[33] B, 47, 10; G, 33, 3: *avyāpyavṛtti-*; N, 204, 4: *vyāpyavṛtti-*. My translation is based upon the latter reading.

[34] According to Udayana, color is a quality that occurs pervading its locus. The color green residing in a green leaf, for example, occurs pervading its locus. One might say, 'But we actually see a number of entities whose color is variegated. To give an instance, one can see green leaves with yellow spots.' In answer to this question, Udayana postulates the existence of the generic charcacter 'variegated-ness'.

Padmanābha Miśra holds that, although there is variegated color and touch in earthly products, they do not inhere in an atom (*Setu*, pp. 181–182). But Śaṅkara Miśra, on the other hand, thinks that there is variegated color even in an atom (*VU.* on *VS*, 7, 1, 6.). Cf. Umesh Mishra, *Concept of Matter* (The Allahabad Law Journal Press: Allahabad, 1936), p. 74.

[35] B, 48, 4; G, 33, 14: *śuklatvādikam*; N, 209, 2: *śuklādikam*. My translation is based upon the latter reading.

[36] Cf. p. 70. The mixture of generic characters under discussion may be illustrated as below.



If the color white were a generic character, the circle of the dotted line, which, in the diagram, indicates the domain of the color white, would not cross the other circles indicating the domains of a cow, an animal, and an earth substance.

37 According to the Vaiśeṣika philosophy, mineral materials are fire substances. Gold, copper, and the like become fluid when heated for a long time.

38 Cf. Part I, Chapter V, F.

39 If earth were always found in the form of atoms, then aggregates of atoms possessing smell, such as fragrant flowers, would be substances other than earth. One cannot deny the existence of flowers and the like which we can actually see and call by names. As long as they exist, they must be classified by some category. But it is impossible to consider flowers and the like to be made of substances other than earth, because they possess smell, which is one of the special qualities of earth.

40 Since one can perceive products, such as a pot and cloth, one can know the existence of products by perception. It is well-known that a product is composed of many atoms. Therefore, granted that one cannot perceive an atom, it is still possible, Udayana thinks, to infer the existence of atoms by using products as the marks of the existence of atoms.

41 Cf. *NM*, II, pp. 72–73; *NSM*, ad 36; p. 16, 1.12; *NV*, ad 4, 2, 17.

42 Cf. *NV*, ad 4, 2, 17 (the Kāśī ed., p. 515): "Disjunction cannot continue to complete dissolution. This disjunction has for its substratum an entity to be disjoined. It is contradictory to say that there is no entity to be disjoined and that there is disjunction. (*na pralayānto vibhāgaḥ, sa cāyaṃ vibhāgo vibhajyamānādhāro, vibhajyamānaś ca nāsti vibhāgo'stīti vyāghātaḥ*)". Cf. *NSM*. p. 16, 1. 16ff.

43 The only reason that we can see some far away objects and not others is that the former are larger. If one could see objects that lacked largeness, this would not be true.

44 This objection is the same as Śrīdhara's opinion. See *NK*, p. 31, 1.16: *paramāṇusvabhāvāyāḥ pṛthivyāḥ sattve kiṃ pramāṇam anumānam anuparimāṇatāratamyaṃ kvacid viśrāntaṃ parimāṇatāratamyatvād mahatparimāṇatāratamyavat*. Cf. *NSM*, p. 16, 1. 13ff.

[45] What Udayana means by circular reasoning is Śrīdhara is using atomic size (*aṇu-parimāṇa*) to prove the existence of the atom. But he cannot prove atomic size without having the atom to begin with. Atomic size is not simply an ultimate reduction of largeness (*mahattva*), for largeness is found only in substances from the triad on up.

[46] This is the argument of some one who would do away with diads altogether. His atoms are the parts of triads. Their plurality (*bahutva*) can serve to produce largeness (*mahattva*).

[47] Cf. S. Bhaduri, *Studies in Nyāya-Vaiśeṣika Metaphysics* (Poona, 1947), p. 75.

[48] If the rule were simply 'whatever is a product possesses parts', one could not prove the existence of the atoms by means of it. For example, by the rule 'whatever has smoke has fire' we cannot prove that what lacks smoke lacks fire. To prove the existence of the atom the rule must be reversible. This is what is meant by a *sama-niyama* (B, 53, 5). In a *sama-niyama*, each of the two terms is both *vyāpaka* (the pervader) and *vyāpya* (the pervaded). It is because the rule 'whatever is a product-substance has parts' (*yat kāryadravyaṃ tat sāvayavam*) is a *sama-niyama* that one can prove that what is not a product-substance lacks parts. Cf. P 82, 9. As for *sama-niyama*, see *BhU*, p. 17, 1.23, *TSD*, p. 17, 1.1; *TSDP*, p. 17, 1.6.

[49] Substances, such as a pot and a human body, maintain their configuration until they are broken or transformed into other substances. For example, an ordinary pot has a relatively narrow mouth and a wider belly. When a pot is broken into pieces in such a way that neither the mouth nor the belly of the pot is recognizable any more, one cannot admit the existence of the pot. Here the property of having a narrow mouth and a wider belly is the mark by which one can recognize the existence of a pot. Such a configuration of parts or characteristic features is called '*saṃsthāna*'. Similarly, one can recognize an entity to be a human body from the configuration of its parts, such as the arms, the hands, etc.

[50] B, 54, 5 and N, 229, 10: *bhramaṇa-*; G, 37, 12: *gṛhakaraṇa-*. The latter reading has been given also in the footnote of the B edition. My translation is based upon the reading of the G edition, for *bhramaṇa* is not the normal word for churning milk (*manthana*).

[51] 'The state of being a body' (or body-ness) is not superior to earth-ness because earth-ness extends to certain senses and objects which are not bodies. It is not inferior because it extends to bodies of water (as in Varuṇa's world) which are not earth. Body-ness and sense-ness are actually cross-connected with earth-ness. They can therefore not be considered generic characters. Cf. *NSM*, p. 17, 1. 8.

[52] Cf. Part I, Chapter V, G. According to the Vaiśeṣika philosophy, neither a universal nor an absence possesses a generic character. But these two may also be objects, which are considered to be the third kind of product. If 'the state of being an object' (or object-ness) were a generic character, it would also have to reside in a universal or an absence. But this is impossible in the Vaiśeṣika system.

[53] Cf. *LV*, Text 35.

[54] Cf. *LM*, p. 23; *LV*, Text 36.

[55] Cf. *LM*, p. 24; *LV*, Text 39.

[56] The opponent here says that, if body is not born from sexual union, one would be forced to accept that an effect is born without any cause. Here the opponent considers sexual union to be the cause of all bodies.

[57] But not all kinds of body are born from sexual union. Worms, mosquitoes, etc., have bodies, but their bodies are not born from sexual union. Therefore, the state of being a body is found even in the domain of bodies not born from sexual union.

[58] 'The third stage' means the last of the following three stages: *bālya* (from birth to the 5th year), *kaumāra* (from the 6th year to the 15th year), and *yauvana* (from the 16th year to the 25th year).

[59] 'The tenth stage' means the last of the following ten stages: *garbhāvāsa* (staying in the womb), *janma* (birth), *bālya, kaumāra, pauganda*, which comprise childhood, *yauvana* (youth), *sthāvirya* (matured age), *jarā* (old age), *prānarodha* (suppression of breath), and *nāśa* (death).

[60] Cf. Earth text 28.

[61] Cf. S. D. Joshi and J. A. F. Roodbergen, *Patañjali's Vyākaraṇa-Mahābhāṣya*, kārakāhnika (P.1.4.23–1.4.55), University of Poona, Poona, 1975, p. 69, §.13.

[62] Praśastapāda divides the quality knowledge (*buddhi*) into two: correct knowledge (*vidyā*) and incorrect knowledge (*avidyā*). He also subdivides the latter into four: doubt (*saṃśaya*), misconception (*viparyaya*), indistinct cognition (*anadhyavasāya*), and dream (*svapna*) (cf. *PBh*, p. 172.). When Udayana says, "knowledge [communicated] in a dream and knowledge [communicated] in a doubt belong to [the group of] misconception", he does not use the word 'misconception' in the sense of the second kind of false knowledge, but rather uses it in a wider sense to include in it dream and doubt.

[63] According to the *Kiraṇāvalīprakāśa* (*KVP*), "to be superintended by separate 'enjoyers' [i.e., souls] is to possess conjunction with the mind which causes enjoyment [or experience]" (cf. *KVP*, 239, 1: *pratiniyateti bhogajanakamanaḥsaṃyogavanta ity arthaḥ*.).

[64] Udayana holds that the following positive and negative concomitances are valid: Whatever has individual breath has life, death, etc., and whatever does not have life, death, etc., has no breath. Thus, Udayana thinks that it is possible to prove by the existence of breath that those characteristics, such as life and death, are not doubtful marks. Cf. *NSM*, p. 17, l. 10.

[65] Vardhamānopadhyāya in his *Kiraṇāvalīprakāśa* (*KVP*) gives the following verses as a canonical authority:

> The Sarala and Arjuna trees which are born on the bank of the Narmadā go to the highest goal by touching the water of the Narmadā.
> A tree frequented by herons or vultures is born in the graveyard.
> (*KVP*, 243, 7–9: *narmadātīrasañjātāḥ saralārjunapādapāḥ/*
> *narmadātoyasamsparśāt te 'pi yānti paraṃ gatim//*
> *śmaśāne jāyate vṛkṣaḥ kaṅkagṛdhropasevitaḥ/*)

[66] Cf. Earth Text 28.

[67] B, 59, 7–8: *anapekṣitasamavāyikāraṇam asamavāyikāraṇam*; G, 40, 11: *anapekṣitasamavāyikāraṇam*; N, 246, 3: *anapekṣitaṃ samavāyikāraṇam*. My translation is based upon the reading of the G edition or the N edition.

[68] If a diad were produced by a water atom and an earth atom, the diad would possess smell, a cold touch, and natural fluidity. Of these three qualities, the first is the special quality of earth, the other two are special qualities of water. The diad in question must be earth because of the presence of smell. It must simultaneously be water because of the presence of a cold touch and natural fluidity. Hence there would be a mixture of the generic characters earth-ness and water-ness.

[69] These *prasaṅgas* are very elliptically expressed. If it were not true that at least sometimes two homogenous atoms could combine in a diad, the water, etc., which we perceive would always possess some quality belonging to a non-water substance. Thus we would never perceive water, fire, or air in their pure form, viz., as scentless, tasteless, and colorless, respectively.

[70] All that has been proved so far is that bodies which contain five substances (earth, water, fire, air, and space) can have only one substance as their inherent cause. It remains to be shown that this inherent cause is earth rather than any of the others.

[71] Smell is the special quality of earth. Touch may disappear from an earth substance, but smell never ceases to be in any earth substance.

[72] Cf. *LV*, Text 73.

[73] Cf. Fire Text 9.

[74] B, 62, 14: *rāṭāḥ*; G, 43, 2: *jhāṭāḥ*; N, 256, 5: *bhāṭāḥ*. The last means 'broom' in Bengali and seems the most likely choice of the three readings.

[75] It is generally admitted that the degree of the effect is in accordance with the degree of the cause. Thus, if an object is very large, it should be very visible, that is to say, visible from a greater distance. Conversely, if one entity is more closely perceived from a distance than another entity, it must be larger than the other.

[76] An object can have largeness only because of the number of its parts. If a triad had no parts, it could have no largeness and would therefore be invisible.

[77] The Vaiśeṣika doctrine holds that objects like pots and cows are built up by a long series of constructions. When a pot is broken, one sees the parts which were its inherent cause. When one breaks those parts, one sees the parts of the parts. Now if the inherent cause of the pot were not sizable 'product substances', but merely ultimate atoms, when we break the pot we would be left with only those ultimate atoms, which by definition are invisible. Hence, it is impossible that pots, etc., should be directly constituted of atoms.

[78] The Vaiśeṣika doctrine holds that two different substances cannot inhere in the same inherent cause. The pot and its parts cannot inhere in the same things. The pot inheres in the halves; the halves inhere in *their* parts. But a quality and a substance may inhere in the same inherent cause. Thus, the color of the pot-half and the pot both inhere in the pot-half. If two entities inhere in the same inherent cause, one of these entities must be incorporeal (*amūrta*).

[79] Cf. Bhaduri, *Studies in Nyāya-Vaiśeṣika Metaphysics*, p. 63; *NVTT*, ad. 4, 2, 24, p. 459.

[80] The Vaiśeṣika doctrine holds that a cloth composed of fifty threads inheres in the fifty threads. If one takes the last thread away, the 50-thread cloth is destroyed and a new 49-thread cloth is created. This 49-thread cloth could not exist during the existence of the 50-thread cloth because two corporeal entities cannot share the same inherent causes.

The objector here suggests what seems to be a simpler view, viz., that a whole series of cloths, from a two-thread cloth up to the 50-thread cloth, exist simultaneously. When we take away the fiftieth thread we destroy only the last of these cloths; the other forty-eight cloths remain.

Udayana's refutation of this apparently simple view is to ask what would happen if from the 50-thread cloth we took away the *first* thread. Since in the objector's view the first thread is an inherent cause common to all forty-nine threads, there would ensue no cloth at all. We would see nothing but the threads.

Hence, by exclusion of the opposing view, we are left with the doctrine that each time any thread is taken from the cloth, a new cloth is created until one is left with two threads only. If one takes *them* apart, no cloth remains.

[81] Where two atoms combine to form a diad, the atoms are called the inherent cause of the diad. The instrumental cause is their conjunction. The non-inherent cause (*asamavāyikāraṇa*) is the number two inherent in the atoms. It is here pointed out that the number one can never be a 'non-inherent' cause of anything because, as long as it obtains, there can be no conjunction with a second substance.

[82] B, 65, 16: *kāryaṃ na syāt*; G, 44, 16: *kāryaṃ na mahat syāt*; N, 262, 8: *kāryaṃ na mahat*. My translation is based upon the reading of the G edition.

[83] B, 65, 17; G, 44, 17: *yadi hi*; N, 262, 10: *yadi ca*. My translation is based upon the reading of the N edition.

[84] Fiber is the cause of thread. Thread is the cause of cloth. Hence fiber is the cause of the cause of cloth. In other words, cloth is the effect of the effect of fiber. One can easily see that fiber does not produce cloth directly. With this in mind, Udayana gives the general statement: A cause of a cause does not produce an effect of an effect.

NOTES TO THE SECTION ON WATER

[1] Cf. Earth Text 2.

[2] *VS*, 2.1.2: *rūparasasparśavatya āpo dravāḥ snigdhāś ca.*

[3] *VS*, 4.1.12. Cf. Earth Note 26; Fire Note 3.

[4] *VS*, 5.1.7. Cf. Earth Note 27.

[5] *VS*, 5.1.17. Cf. Earth Note 30.

[6] Cf. P 94, 6.

[7] Here the author is anticipating the objection: "But we actually see certain kinds of water objects change their color or smell when heated by fire".

[8] The B edition and the N edition say, " . . . It is not removed . . . ", but 'not' (*na*) should be omitted, or an additional '*na*' is required. What the G edition does is to supply an extra *na* (= double negative). However, it seems to be better to read '*pākena*' (instrumental) as '*pāke na*' (locative + na).

[9] The author here means that a slightly sweet substance made of water remains sweet even when 'cooked' intensely for a long time.

[10] "That i.e., water which has been absorbed by and then released from clouds" means rain. One can consider rain to be pure insofar as it is not commingled with other substances.

[11] As for a kind of association of a *jāti* with 'higher degree' (*prakarṣa*) with reference to an action or quality inherent in one and the same object, see S. D. Joshi, *Patañjali's Vyākaraṇa-Mahābhāṣya, tatpuruṣāhnika* (P.2.2.2 – 2.2.23), University of Poona, Poona, 1973, p. 118, §.1.

[12] B, 68, 15; G, 46, 18: *guṇaikanimittatvāt*; N, 271, 6: *guṇaikaniyatatvāt*. I take the reading of the N edition.

[13] In the hierarchy of generic characters, the position of the generic character pot-

ness or cloth-ness is lower than the generic character earth-ness. An atom may have the generic character earth-ness, but it does not have any generic character lower than earth-ness. The existence of a generic character in a certain substance is manifested or established by the characteristics found in the substance. For example, the existence of cowness in a cow is manifested by the characteristics found in a cow, such as cloven hooves, four legs, and horns. No atom has the characteristics that establish a generic character lower than earth-ness.

[14] Milk has the particular kind of color, taste, and touch which have been brought about by 'cooking'. Milk-ness is manifested by that kind of color, taste, and touch. Suppose that the color, taste, and touch of milk disappear due to another 'cooking'. Now that those qualities have disappeared, milk-ness is forced to disappear, for the existence of milk-ness is established by those qualities.

Someone might say, "We grant that there are no color, taste, touch, etc., at the present moment, but those qualities might reoccur due to a third 'cooking' in the future. Therefore, it would be possible to say that those qualities can establish or manifest milk-ness by the possibility that they might occur again." Anticipating this argument, the author gives this refutation.

[15] A diad, etc., possesses the universal milk-ness when the color, taste, etc., in its atoms manifest milk-ness. On the other hand, there is no quality in the atoms that could manifest viscidity-ness in the diad except viscidity itself.

[16] Since the existence of color, etc., does not imply the existence of viscidity-ness, there would need to be a quality different from the color, etc., of the atoms. Such a quality could be nothing other than viscidity.

[17] Some atoms have a particular color and taste, such that when they join into diads, these diads become milk. Other atoms have a color and taste that permit their diads to become oil, or butter, or fat. In such cases the atom is the material cause (*samavāyikāraṇa*) of the diad; the color of the atom is the *asamavāyikāraṇa* of the color of the diad and is the manifestor of the universals (milk-ness, oil-ness, etc.) that inhere in the diad.

The objector had first suggested that an atom might have some quality that is the manifestor of the viscidity in the diad. Udayana said no; the qualities of atoms manifest milk-ness, butter-ness, etc., not viscidity. The objector now suggests that certain qualities of the atom might be a general cause (*kāraṇasāmānya*): they might cause both oil-ness and viscidity in the diad. The answer is no, because viscidity inheres in oil, butter, and fat, each of which are built out of different kinds of atoms (seed-atoms, milk-atoms, and meat-atoms). If the atom-color that manifests oil-ness also manifests viscidity, then where does the viscidity in butter come from?

The example of the coconut is brought up because in a coconut oil and butter seem to be the same thing. Thus it might be supposed that there is a common manifestor of the coconut's viscidity and its 'oilness-butterness'. But Udayana shows that the portion of a coconut that possesses viscidity is really just oil. It is only called butter because of its similarity of taste to butter ('coconut butter').

[18] 'Cause' here means the inherent cause. No quality can come into existence unless it resides in its inherent cause. The process of qualities of causes proceeds as follows: On account of color, etc., inherent in an atom, the color and the like inherent in a diad come into existence. Then on account of the color, etc., of the diad, the color, etc., of a triad appears in turn. In this way the qualities of the final whole, such as our body, are brought into existence. Cf. *KV* (B) 186, 10.

[19] Everybody knows that gold is heavy but fire is not. Therefore, one might think that gold is not made of fire. Udayana, however, follows Praśastapāda in assuming that gold is made of fire. According to Udayana, the heaviness of gold may be perceived because a low degree of heaviness which is found in fire has reached in gold the most extreme state of heaviness.

[20] B, 69, 14: *sarvajaladhāriṇī-snigdhatā*; G, 47, 7: *sarvajalasādharaṇī*; N, 274, 4: *jalasādharaṇī*. I take the reading of the G edition.

[21] See *KV* (B) 76, 7.

[22] Cf. *KV* (B) 54, 8.

[23] Śrīdhara also says that the existence of bodies made of water is known from scriptural authority (cf. *NK*, 30, 26.). The word '*varuṇaloka*' is found in the *Kauṣītaki Upaniṣad* (1.3), but in this Upaniṣad one cannot find a passage indicating that water bodies are found in the world of Varuṇa. Cf. *LV*, Text 48.

[24] B, 71, 2: *bhaṅgurasvabhāvatvād*; G, 48, 15: *svabhāvadravatvād*; N, 279, 6: *svabhāvadravyatvād*. I take the second reading.

[25] B, 71, 17: *nanu*: G, 48, 18; N, 279, 11: *na tu*. I take the latter reading.

[26] Udayana gives almost the same syllogism in *LV* (Text 51).

[27] The opponent here says that snow and hail are not made of water because they can be solid at least for a moment, that is to say, they lack natural fluidity. In *LV* (Texts 54 and 55) Udayana refutes this argument on the grounds that they become fluid in a few moments. Praśastapāda deals with this problem in the section on fluidity as follows: Mutual conjunctions appear among the water atoms that are connected with heavenly fire. Those conjunctions produce substances and are called 'aggregations'. Since the fluidity residing in the water atoms is counteracted by those aggregations, product substances, such as snow and hail, do not appear to have fluidity. Cf. *PBh*, 264, 26; *KV* (G), 256.

NOTES TO THE SECTION OF FIRE

[1] Cf. Earth Text 2, Water Text 1.

[2] *VS*, 2.1.3: *tejo rūpasparśavat*.

[3] *VS*, 4.1.12. Cf. Earth Note 26; Water Note 3.

[4] *VS*, 2.1.7: The fact that the fluidity of things made of fire, such as tin, lead, iron, silver, and gold, appears through conjunction with fire is similar to the case of water. (*trapusīsaloharajatasuvarṇānāṃ taijasānām agnisaṃyogād dravatā'dbhiḥ sāmānyam.*) Cf. Earth Note 29.

[5] *VS*, 5.1.17. Cf. Earth Note 30; Water Note 4.

[6] Padmanābha supposes that Udayana is giving two senses to the word '*siddhiḥ*' of Praśastapāda. (1) These qualities are proved (*siddha*) by the remarks of the Sūtrakāra; and (2) these qualities are well known in themselves (*prasiddha*) even by uneducated persons. Why does Udayana add the second sense? Padmanābha says, "their establishment in the form of where the notion of them comes from cannot be made by the *sūtra*; that is why he says *prasiddha* (*Kiraṇāvalībhāskara* (P), p. 97, 1.8: *sūtrād utpattirūpā siddhir na sambhavatīty ata āha*)". He intends this: the *sūtra* may tell you that color exists in fire, but unless you know previously what color is, the information is of no use.

[7] The objector is suggesting that as the moon and stars are reservoirs of moisture (*rasa, soma, amṛta*, etc.), the natural color of water (moisture) is imparted to the fire that emanates thence. Udayana's answer is that the color of water cannot supersede the color of other substances. As an example he chooses *nīla*, i.e., indigo, the most useful fast color known to man before the invention of aniline dyes.

[8] *KV* (B), 50, 6.

[9] An inconclusive mark here is a mark which is found in the *vipakṣa*. The inference in question runs as follows: The visual organ is 'that which does not function by coming in direct contact with its objects', because it has 'the power of grasping objects which are not directly connected with its locus'.

Here the mark is 'the power of grasping objects which are not directly connected with its locus'. Here the *vipakṣa* is that which functions by coming in direct contact with objects, as for example, a lamp. One can see that the mark is present also in the domain of the *vipakṣa*; light can grasp or illuminate objects which are not with the locus of the light, i.e., the lamp. The mark is thus inconclusive.

[10] For *pṛthvagratā* see *Nyāyavārttikatātparyaṭīkā*, p. 164, 1.20 (Calcutta edition). It literally means 'the front portion's being broad[er]'. It refers to the principle by which light is dispersed; the base of a cone increases in diameter as the cone is extended.

[11] Vardhamāna in his commentary on *KV* ascribes this theory to Śālikanātha. Cf. N, 288, 11. Padmanābha makes it clear that in this theory the ocular organ (*indriya*) is not the eye itself but the fire of the eye combined with light. Cf. P, 98, 14.

[12] One might wonder: That which is concealed by a wall, etc., is not perceived because the hidden object lacks the ability to be perceived by the visual organ, not because the sight released from the visual organ does not reach the object to be seen.

[13] That an object is perceived means that the object possesses the capability (*yogyatā*) of being perceived. If objects are not momentary, but endure for a certain amount of time, then the capability, that is, the very nature of an object must also endure. Hence, even when a wall, etc., is put between the eyes and the object, the object's capability of being perceived does not disappear.

[14] As Udayana is here giving the Buddhist position, he uses the technical Buddhist terms. In general Buddhism does not conceive of cause and effect as a diadic relation. Rather, a number of factors, in cooperation ('*sahakāriṇaḥ*'), result in an additament (*atiśaya*; something over and above the sum of the cooperating factors). Now, even in this doctrine it is necessary that there be a connection (*pratyāsatti*; a mutual dependence) between the causal factors in order to produce a result. A seed in a granary cannot cooperate with the earth in the garden to produce a sprout. Thus, the Buddhist doctrine of perception has this in common with the Nyāya that the visual organ and its object must be connected.

[15] 'Immediate succession' means that the second point-instant (*kṣaṇa*) appears as soon as the first disappears. Udayana holds that the visual organ and its object do not enter into such a relation, but he does not argue the matter here where he is only concerned to prove that there must be a connection between the visual organ and its object.

[16] Skt. B, 76, 9–10: *tad evendhanaṃ dīpanaṃ yasya tat tathoktam*. In the text of Praśastapāda, Udayana must have read *bhaumaṃ kāṣṭhendhanam ūrdhva*°, etc., without the word *prabhava*, just as later on the text reads *divyam abindhanam* with no *prabhava*. Hence, he glosses *kāṣṭhendhana* as a *bahuvrīhi* (*kāṣṭham eva* [*tad eva*] *indhanaṃ* [*dīpanaṃ*] *yasya tat tathoktam*: that of which the fuel is wood is called *kāṣṭhendhana*, i.e. 'possessing wood for its fuel').

[17] The B edition has *śneṣmaṇor*, but it should be *śleṣmaṇor*. The G and N editions agree with the latter. Cf. G, 52, 9; N, 290, 2.

[18] The word '*pariṇāma*' often means the action of digesting (*āharaṇa*), but here it denotes that which is digested. Hence, '*rasādipariṇāma-*' in the text is not a *tatpuruṣa* compound, but a *karmadhāraya* compound. Cf. P, 100, 9.

[19] Here it is implied that the fluidity of earth does not always disappear when intensely heated (cf. P, 100, 17). The fluidity found in butter may disappear when intensely heated, but there might be other earth substances whose fluidity would not disappear even when heated intensely for a long time.

[20] In the inference: There is fire on the mountain, because of smoke, as in the case of a kitchen, the mountain is the *pakṣa*; a kitchen is the example. It often happens that a kitchen has the aid of a fan while the mountain has fire without the aid of a fan. This kind of discrepancy of some attribute of the *pakṣa* with that of an example is, however, not a logical fault. Cf. P, 100, 23.

In the inference with which we are dealing in the text, the example butter possesses

fluidity which disappears when intensely heated. On the other hand, the *pakṣa* here has fluidity that will not disappear when intensely heated. But, as mentioned above, the discrepacy between these two attributes does not lead to a logical fault.

[21] Cf. N, 291, 15.

[22] First he said that we cannot make a valid inference that 'gold is made of fire because its fluidity is non-disappearing' because we cannot show a *vyāpti* between 'the property of fluid and non-disappearing' and fire-ness. Now he says that we cannot show that the inference 'gold is made of earth because it has fluidity' is subject to contradiction (viz., 'gold is not made of earth because its fluidity is non-disappearing') because the mark of the contradiction (non-disappearing fluidity) can be proved in both gold and earth.

[23] Cf. *KV* (B), 71; 15.

[24] As Praśastapāda and the author of the Sūtras have assigned fluidity to the three substances earth, water, and fire, and as they have assigned natural fluidity to water, there is no scriptural statement to prevent artificial liquidity from arising in a substance (viz., fire) other than earth. Nor has any other preventive fact been adduced.

[25] That which possesses earth-ness is not always characterized by conditional fluidity. Even though a pot is characterized by earth-ness, it does not possess conditional fluidity.

[26] That is to say, when the pot is placed in boiling water. Boiling water is fire plus particles of the preventive substance water. What Udayana has in mind is putting the pot is water, not putting water in the pot. Cf. *Dinakarīya* on *NSM* 42 (Chaukhamba, 1906, p. 178, 1.6): *jalamadhyasthaghaṭādau vyabhicāravāraṇāyāsati pratibandhaka iti.*

[27] *Puṭapāka* is "a particular method of preparing drugs in which the various ingredients are wrapped in leaves, covered with clay, and roasted in the fire" (Apte, p. 1027.).

END OF THE NOTES TO THE SECTION ON FIRE.

ABBREVIATIONS AND REFERENCES

Annambhaṭṭa: *Tarka-Saṁgraha of Annambhaṭṭa with the author's Dīpikā and Govardhana's Nyaya-Bodhinī*, ed. by Yashvant Vasudev Athalye (Bombay Sanskrit Series 55, 1963).

B.: The Benares edition of Kiraṇāvalī of Udayana, ed. by V. P. Dube (Benares Sanskrit Series 9, Benares, 1897).

Bhaduri, S.: *Studies in Nyāya-Vaiśeṣika Metaphysics* (Bhandarkar Oriental Research Institute, Poona, 1947).

Bhattacharya, D.: *History of Navya-Nyāya in Mithilā* (Mithila Institute, Darbhanga, 1958).

Bhattacharya, G.: *Studies in the Nyāya-Vaiśeṣika Theism* (Sanskrit College, Calcutta, 1961).

BhP.: *Bhāṣāpariccheda*, ed. by Ananta Śastri (Nirnaya-Sagar Press, Bombay, 1916).

BhU.: *Bhāskarodayā*, ed. by Pandita Mukunda Jhā (Nirnaya-Sagar Press, Bombay, 1926).

Bocheński, J. M.: *Formale Logik* (Verlag Karl Albers, Freiburg/München, 1956).

Dasgupta, S. A.: *History of Indian Philosophy* (Cambridge University Press, Cambridge, 1951), Vol. 1.

Dinakarīya: ed. by Ananta Śastri (Nirnaya-Sagar Press, Bombay, 1916).

DKV.: *Dravyakiraṇāvalī*, ed. by N. C. Vedantatirtha together with the *Kiraṇāvalī* (Calcutta, 1956).

Faddegon, B.: *The Vaiśeṣika-System* (Amsterdam, 1918).

G.: Gaekward's Oriental Series edition (No. 154) of the *Kiraṇāvalī*. Cf. Udayana.

Goekoop, C.: *The Logic of Invariable Concomitance in the Tattvacintāmaṇi* (Reidel, Dordrecht, 1967).

Hattori, M.: *Dignāga, On Perception*, Harvard Oriental Series 47 (Harvard University Press, Cambridge, Mass., 1968).

HNM.: *History of Navya-Nyāya in Mithilā*, see Bhattacharya, D.

Ingalls, D. H.: *Materials for the Study of Navya-Nyāya Logic*, Harvard Oriental Series 40 (Harvard University Press, Cambridge, Mass., 1951).

Ingalls, D. H.: 'Human Effort versus God's Effort in the Early Nyāya (NS. 4.1.19–21)', *Dr. S. K. Belvalkar Felicitation Volume* (Motilal Banarsidass, Delhi, 1957), pp. 230–235.

Ingalls, D. H.: 'Logic in India', *Encyclopaedia of Britannica*, Vol. 14 (Encyclopaedia Britannica, Inc., Chicago, 1963).

Joshi, S. D. and J. A. F. Roodbergen: *Patañjali's Vyākaraṇa-Mahābhāṣya*, Publications of the Centre of Advanced Study in Sanskrit, No. 7 (1973), No. 10 (1975) (Poona University, Poona).

Kajiyama, Y.: 'Bhāvaviveka, Sthiramati and Dharmapāla', *Wiener Zeitschrift für die Kunde Süd- und Ostasiens und Archiv für Indische Philosophie*, Band XII–XIII, 1968–1969.

Kanakura, E.: *Indo no Shizen Tetsugaku* (Natural Philosophy in India) (Heirakuji Shoten, Tokyo, 1971).

Kaviraj, G.: *Gleanings from the History and Bibliography of the Nyāya-Vaiśeṣika Literature* (Indian Studies Past and Present, Calcutta, 1961).

Kitagawa, H.: 'A Note on the Methodology in the Study of Indian Logic', *Journal of Indian and Buddhist Studies* 8, No. 1 (1960).

Kitagawa, H.: *Indokoten Ronrigaku no Kenkyū* (A Study of Classical Indian Logic) (Suzuki Foundation, Tokyo, 1965).

KR.: *Kaṇādarabhasya* of Śaṅkara Mishra, ed. by V. P. Dvivedin, Chowkhamba Sanskrit Series Nos. 231, 255 (Benares, 1917).

KV.: *Kiraṇāvalī*. See Udayana.

KVP.: *Kiraṇāvalīprakāśa*, ed. by S. C. Sarvabhauma (Asiatic Society of Bengal, Calcutta, 1911).

LM.: *Lakṣaṇamālā*. See Udayana.

LVP.: *Lakṣaṇāvalīprakāśa*, ed. by Vidyavacaspati Śri Śasinātha (Darbhanga Institute, Mithila, 1963).

Matilal, B. K.: *The Navya-Nyāya Doctrine of Negation*, Harvard Oriental Series, No. 46 (Harvard University Press, Cambridge, Mass., 1968).

Matilal, B. K.: *Epistemology, Logic, and Grammar in Indian*, Philosophical Analysis (Mouton, The Hague, Paris, 1971).

Matilal, B. K.: '*Kiraṇāvalī* included in *Encyclopedia of Indian Philosophies*, ed. by Karl H. Potter, Motilal Banarsidass (Patna, Delhi, Varanasi, 1977), pp. 589–602.

Matilal, B. K.: 'The Intensional Character of Lakṣaṇa and Saṃkara in Navya-Nyāya', *Indo-Iranian Journal* 8, No. 2.

Mishra, U.: *Conception of Matter* (The Allahabad Law Journal Press, Allahabad, 1936).

MMK.: *Mūlamadhyamakakārikās de Nāgārjuna avec la Prasannapadā Commentaire de Candrakīrti*, ed. by Poussin, Bibliotheca Buddhica 4 (St. Petersburg, 1931).

N.: The Bibliotheca Indica edition of *Kiraṇāvalī*, ed. by M. S. Chandra Sarvabhauma (Calcutta (I–II), 1911–12); ed. by N. C. Vedantatirtha (Calcutta (IV), 1956).

Nakamura, H.: *Indo Shisō no Shomondai* (Problems in Indian Thought) (Shunjusha, Tokyo, 1967).

NBS.: *Nyāyabhūṣaṇam*, ed. by Svāmī Yogīndrānanda (Ṣaḍdarśana Prakāśana Pratiṣṭhānam, Benares, 1968).

NC.: *Nyāyacandrikā* of Keśava Bhaṭṭa, University of Kerala Sanskrit Series 189, 1958.

NK.: *Nyāyakandalī* of Śrīdhara, Vizianagram Sanskrit Series 4 (Benares, 1895).

NLV.: *Nyāyalīlāvatī* of Vallabha, Chowkhamba Sanskrit Series Nos. 355, 379, 387, 400, 407, 409, 412, 422 (1927–1934).

NM.: *Nyāyamañjarī* of Jayanta Bhaṭṭa, ed. by G. S. Tailaṅga, Vizianagram Sanskrit Series 8, 10. (E. J. Lazaraus, Benares, 1895).

NMV.: *Nyāyamuktāvalī*, ed. by S. Gosvamin, *Pandit* 25 (Medical Hall Press, Benares, 1960).

NSM.: *Nyāyasiddhāntamuktāvalī*, ed. by Ananta Śastri (Nirnaya-Sagar Press, Bombay, 1916).

NV.: *Nyāyavārttika* of Uddyotakara, Kashi Sanskrit Series (Benares, 1916).

NVTT.: *Nyāyavārttikatātparyaṭīkā* of Vācaspatimiśra, Kashi Sanskrit Series 24 (Benares, 1925).

P.: *Kiraṇāvalībhāskara* of Padmanābhamiśra, ed. by Princess of Wales Sarasvatī Bhavana Texts 1 (1920).

PBh.: *Praśastapādabhāṣya* of Praśastapāda, Vizianagram Sanskrit Series 4 (Benares, 1895).

Potter, K. H.: *The Encyclopedia of Indian Philosophies*, Motilal Banarsidas, Delhi, Vol. 1 (1970), Vol. 2 (1977).

Potter, K. H.: *The Padārthatattvanirūpaṇam of Raghunātha Śiromaṇi*, Harvard-Yenching Institute Studies XVII (Harvard University Press, Cambridge, Mass., 1957).

Praśastapādabhāṣyasamālocana: Chowkhamba Sanskrit Series, Nos. 255, 1919.

PTN.: *The Padārthatattvanirūpaṇam of Raghunātha Śiromaṇi*, transl. by K. Potter, Harvard-Yenching Institute Series, XVII (Harvard University Press, Cambridge, Mass., 1957).

Quine, W. V. O.: *Mathematical Logic* (Harper and Row, New York, 1962).

Raghunātha Śiromaṇi: *The Kiraṇāvalī Prakāśa Dīthiti*, ed. by G. N. Kaviraj, Princess of Wales Sarasvatī Bhavana Texts 38 (Vidya Vilas Press, Benares, 1932).

Raja, K. K.: *New Catalogus Catalogorum* (University of Madras, Madras, 1968), Vol. 4.

Raṅgācārya, M. and Rao Bahadur: *A Descriptive Catalogue of the Sanskrit Manuscripts in the Government Oriental Manuscripts Library, Madras*, Vol. 8, Arthaśāstra, Kāmaśāstra, and Systems of Indian Philosophy-Nyāya (Government Press, Madras, 1910).

Reichenbach, H.: *Elements of Symbolic Logic* (The Free Press, New York, 1966).

SDS.: *Sarvadarśanasaṁgraha*, ed. by V. S. Abhyankar (Bhandarkar Oriental Research Institute, Poona, 1924).

Setu.: *Setu* of Padmanābha, Chowkhamba Sanskrit Series Nos. 316, 342, 354, 374, 375, 384, 394 (1924–1930).

Sharma, D.: *The Differentiation Theory of Meaning in Indian Logic* (Mouton, The Hague, Paris, 1969).

Shastri, D. N.: *Critique of Indian Realism* (Agra University, Agra, 1964).

Staal, J. F.: 'Correlations between Language and Logic in Indian Thought', *Bulletin of the School of Oriental and African Studies*, No. 23 (1960).

Staal, J. F.: 'The Theory of Definition in Indian Logic', *Journal of the American Oriental Society* 81, No. 2 (1961).

Staal, J. F.: 'Review of The Navya-nyāya Doctrine of Negation, by B. K. Matilal', *Indo-Iranian Journal* XIII, No. 3 (1971).

Stcherbatsky, Th.: *Buddhist Logic* (Dover Publication, Inc., New York, 1962).

Stebbing, L. S.: *A Modern Introduction to Logic* (Harper and Row, New York, 1961).

T.: *Taisho Shinshu Daizokyo*, ed. by J. Takakusu and K. Watanabe, 55 vols. (Tokyo, 1924–1929).

Tachikawa, M.: 'A Sixth-Century Manual of Indian Logic', *Journal of Indian Philosophy* 1 (1971), 111–145.

Tarkālaṁkārabhāṣyaparīkṣā: Chowkhamba Sanskrit Series, Nos. 255 (1919).

Thomas, N. L.: *Modern Logic: An Introduction* (Barnes and Noble, Inc., New York, 1966).

TS.: *Tarkasaṁgraha* of Annambhaṭṭa, ed. by Y. V. Athalye, Bombay Sanskrit Series 55 (1963).

TSD.: *Tarkasaṁgrahadīpikā* of Nīlakaṇṭhabhatta. Included in the *Bhāskarodayā* edited by Pandita Mukunda Jhā (Nirnaya-Sagar Press, Bombay, 1926).

TSDP.: *Tarkasaṁgrahadīpikāprakāśa* of Lakshmīnṛisimha Shāstri. Included in the *Bhāskarodayā* edited by Pandita Mukunda Jhā (Nirnaya-Sagar Press, Bombay, 1926).

Udayana: *Ātmatattvaviveka*, ed. by J. Tarkapañcānana and M. Tarkālaṁkāra (Sanskrit Press, Calcutta, 1849).

Udayana: *Kiraṇāvalī* (*The Aphorisms of the Vaiśeṣika Philosophy by Kaṇāda with the Commentary of Praśastapāda, and the Gloss of Udayanācārya*), ed. by Vindhyeśvarī Prasāda Dube, Benares Sanskrit Series, Work 9 (Benares, 1897).

Udayana: *Lakṣaṇāvalī*, ed. by Vindyeśvarīprasādaśarman (Raj-Rajeswari Press, Benares, 1897).

Udayana: 'The Laksaṇāvalī of Udayanācārya', *Paṇḍit*, Vol. 25 (1900).

Udayana: *Nyāyavārttikatātparyapariśuddhi*, ed. by V. P. Dvivedin (Asiatic Society of Bengal, Calcutta, 1911).

Udayana: *Nyāyakusumañjali*, ed. by Laxmana Sastri Dravida, The Kashi Sanskrit Series 30 (Chowkhamba Office, Benares, 1912).

Udayana: *Kiraṇāvalī*, ed. by M. S. Chandra Sarvvabhouma (Bibliotheca Indica, Fasciculus I–III, 1911–1912); ed. by Narendra Chandra Vedantatirtha (Bibliotheca Indica, Fasciculus IV, 1956).

Udayana: *Lakṣaṇamālā* of Udayanācārya, ed. by Śasinatha (Mithila Institute, Jha. Darbhanga, 1963).

Udayana: *Lakṣaṇāvalī*, ed. by Vidyavacaspati Sri Śasinatha (Darbhanga, Mithila, 1963).

Udayana: *Kiraṇāvalī (Praśastapāda with the Commentary Kiraṇāvalī of Udayanācārya)*, ed. by Jitendra S. Tetly, Gaekward's Oriental Series, No. 154 (Baroda, 1971).

Ueda, Y.: *Daijō Bukkyō Shisō no Konpon Kōzō* (Fundamental Structure of Mahāyāna Thought) (Hyakkaen, Kyoto, 1957).

Ui, H.: 'Sanron Kaidai (Introduction to the Three Basic Madhyamaka Texts)', *Kokuyaku Daizōkyō* (Japanese Translation of Tripiṭaka) Sutra Part 5 (Tokyo, 1920).

Ui, H.: *The Vaiśeṣika Philosophy*, Chowkhamba Sanskrit Series 22 (Benares, 1962).

Vidyabhusana, S. C.: *A History of Indian Logic* (Calcutta University, Calcutta, 1921).

VS.: *Vaiśeṣikasūtra* of Kaṇāda, ed. by Muni Jambuvijayi, Gaekward Oriental Series 136 (Baroda, 1961).

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